PUBLIC PRIVATE PARTNERSHIP GOVERNANCE FOR DEVELOPING ROAD INFRASTRUCTURE IN UGANDA: A PUBLIC SECTOR PERSPECTIVE

By

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DECLARATION

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April 2019

DEDICATION

I dedicate this study to my parents, Mr and Mrs Matayo Mugarura, my wife, Bonny Tushabomwe, and my children, Rachael Ayebazibwe, Jeremiah Muhereza, Emmanuel Ahabwe, and Petrus Amanya.

ABSTRACT

Theory and practice promulgate public private partnerships (PPPs) as a new procurement option for unlocking public infrastructure investment gaps in both developed and emerging economies. However, the contribution of PPPs towards improving public service delivery, especially for emerging economies, remains low due to poor governance. Given that Uganda recently adopted PPPs to develop road infrastructure, this study investigated the PPP environment in Uganda in order to establish the best approaches of governing PPPs for sustainable road infrastructure development. To achieve this, both national and international, and theoretical and practical perspectives were employed through qualitative research methodology with six interrelated objectives.

Objective one sought to investigate the understanding and contribution of public infrastructure and PPPs through a review of literature. Findings indicated that PPPs are understood through the lenses of partnership relationships, contractual obligations and project lifecycle functions. Furthermore, PPPs have enormous benefits but are conditional upon the effective management of problems associated with them. Finally, based on public sector perspective, PPPs fit within the theoretical underpinnings of new public governance, public value, and new public service, and to a lesser extent new public management.

The second objective reviewed literature and analysed documents to investigate the key elements of a PPP governance structure. Findings showed key elements of PPP governance structure to include best practices, critical success factors, PPP maturity trajectory, and stakeholder and risk management. Thirdly, literature was reviewed to investigate the international PPPs experiences and road practices. Lessons for Uganda included financial challenges and how governments have responded, the tolling practices and policies employed to ensure affordability and profitability of PPP roads, and the PPP road project examples with successes and failures for each and why such situations had to occur.

Like the second objective, a review of literature and analysis of documents were undertaken to investigate the road reforms and their impact on road performance, and the PPP legal frameworks in Uganda for objective four and five respectively. Findings indicated that the past road subsector reforms have had limited effect on road infrastructure improvement and development because of lack of resource capacities and compromised governance systems and practices. In addition, results showed the existence of various legal policies supporting PPPs, though certain critical legal and policy frameworks are either non-existent, outdated, and with major inadequacies or both.

Lastly, individual interviews were conducted to investigate the suitability of PPPs for road infrastructure development in Uganda. Thirty interviewees were used, and findings indicated a high motivation for PPP adoption but with limited understanding and awareness of PPPs, low PPP readiness levels with several challenges, and vast PPP opportunities but with many obstacles. Based on the aforementioned problems, respondents suggested critical success factors and best practices for effective management of PPP road projects.

The findings from the six objectives resulted in the construction of a suitable PPP assessment and management governance model for road infrastructure development in Uganda. The development of the model was mainly informed by findings from the empirical study (i.e. objective 6), and supplemented with findings from the five literature and documentary analysis objectives in order to create robustness in the model. The effective application of the model is anticipated to remedy the current and future PPP road infrastructure development and governance problems.

OPSOMMING

Die teorie en praktyk verkondig openbare-privaat vennootskappe (PPP's) as 'n nuwe verkrygingsopsie vir die ontsluiting van beleggingsgapings in openbare infrastruktuur, in sowel ontwikkelde as opkomende ekonomieë. Vanweë swak beheer-en-bestuur bly die bydrae van PPP's tot die verbetering van openbare dienslewering, veral in opkomende ekonomieë, egter gering. Aangesien Uganda onlangs PPP's vir die ontwikkeling van padinfrastruktuur aanvaar het, ondersoek hierdie studie die PPP-omgewing in Uganda om die beste benaderings tot die bestuur-en-beheer van PPP's vir volhoubare padinfrastruktuurontwikkeling te bepaal. Om dit te bereik, is nasionale en internasionale, asook teoretiese en praktiese perspektiewe gebruik vir 'n kwalitatiewe navorsingsmetodologie aan die hand van ses onderling verbandhoudende doelstellings.

Doelstelling een was daarop gemik om insig in en die bydrae van openbare infrastruktuur en PPP's aan die hand van 'n literatuuroorsig te ondersoek. Die bevindings het aangedui dat PPP's deur die lense van vennootskapsverhoudinge, kontraktuele verpligtinge en projeklewensiklusfunksies verstaan word. Verder bied PPP's enorme voordele, maar dit hang nou saam met die effektiewe bestuur van die verbandhoudende probleme. Laastens pas PPP's, vanuit die perspektief van die openbare sektor, binne die teoretiese onderbou van nuwe openbare beheer-en-bestuur, openbare waarde, en nuwe openbare diens, en in 'n mindere mate nuwe openbare bestuur.

Die tweede doelstelling was gemik op 'n literatuurhersiening en die ontleding van dokumente met die oog op 'n ondersoek na die sleutelelemente van 'n PPP-beheer-en-bestuur-struktuur. Bevindings het aangedui sleutelelemente van 'n PPP-beheer-en-bestuur-struktuur behels onder meer beste praktyke, kritiese suksesfaktore, die PPP-volwassenheidsbaan, asook belangegroep- en risikobestuur. Derdens is die literatuur hersien met die oog op die ondersoek van internasionale PPP's se ervarings en padpraktyke. Lesse vir Uganda was onder meer finansiële uitdagings en die reaksies van regerings, die tolpraktyke en -beleide wat gebruik is om bekostigbaarheid en winsgewendheid van PPP-paaie te verseker, en voorbeelde van die PPP-padprojek, met suksesse en mislukkings vir elkeen, asook die redes waarom sodanige situasies moes plaasvind.

Soos vir die tweede doelstelling is 'n oorsig van die literatuur en 'n ontleding van dokumente onderneem om die padhervormings en die impak daarvan op padprestasie, sowel as die PPP se regsraamwerke in Uganda vir doelstellings vier en vyf te ondersoek. Bevindings het getoon dat vorige padsubsektorhervormings 'n beperkte uitwerking op padinfrastruktuurverbetering en -ontwikkeling gehad het vanweë 'n gebrek aan hulpbronkapasiteit en gekompromitteerde beheer-en-bestuurstelsels en -praktyke. Daarbenewens dui die resultate daarop dat verskeie regsbeleide bestaan wat PPP's ondersteun, ofskoon bepaalde kritiese regs- en beleidsraamwerke óf ontbreek, verouderd is en aansienlike tekortkominge openbaar, óf albei.

Laastens is individuele onderhoude gevoer om die geskiktheid van PPP's vir die ontwikkeling van padinfrastruktuur in Uganda te ondersoek. Dertig deelnemers is ondervra, en die bevindings dui op aansienlike motiverings vir PPP-aanvaarding, maar met beperkte insig in en bewustheid rakende PPP's, lae PPP-gereedheidsvlakke met verskeie uitdagings, en groot PPP-geleenthede, maar met baie hindernisse. Gegewe die genoemde probleme het die respondente kritiese suksesfaktore en beste praktyke vir effektiewe bestuur van PPP-padprojekte voorgestel.

Die bevindings uit die ses doelstellings het gelei tot die daarstelling van 'n geskikte PPP-assesserings- en beheer-en-bestuursmodel vir die ontwikkeling van padinfrastruktuur in Uganda. Die ontwikkeling van die model is hoofsaaklik ingelig deur bevindings uit die empiriese studie (dit wil sê doelstelling 6), en is aangevul met bevindings uit die vyf literatuur- en dokumentêre ontledingsdoelwitte ten einde robuustheid in die model te skep. Die effektiewe toepassing van die model kan die huidige en toekomstige probleme met PPP-padinfrastruktuurontwikkeling en PPP-beheer-en-bestuur verbeter.

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
ADBI	Asian Development Bank Institute
AFDB	African Development Bank
AIDS	Acquired Immune Deficiency Syndrome
BMAU	Budget Monitoring and Accountability Unit
Bn	Billion
BOO	Build Own Operate
BOT	Build Operate Transfer
BOOT	Build Own Operate and Transfer
BOU	Bank Of Uganda
CMM	Capability Maturity Model
CSFs	Critical Success Factors
DBFO	Design Build Finance and Operate
DRTP	Draft Road Tolling Policy
DUCARs	District Urban Community Access Roads
ECR	East Coast Road
EIA	Environment Impact Assessment
EPEC	European Expertise Centre
ERA	Ethiopian Roads Authority
EU	European Union
F/Y	Financial Year
GDP	Gross Domestic Product
GFC	Global Financial Crisis
GKMA	Greater Kampala Metropolitan Area
IGG	Inspector General of Government
ITF	International Transport Forum
KBE	Kampala Bombo Expressway
KBUE	Kampala Busunju Expressway

KCCA	Kampala Capital City Authority
KJE	Kampala Jinja Expressway
KJR	Existing Kampala Jinja Road
KOB	Kampala Outer Beltway
KPE	Mpigi Expressway
KRR	Kampala Ring Road
M	Million
MFPED	Ministry of Finance, Planning, and Economic Development
MoLG	Ministry of Local Government
MoWT	Ministry of Works & Transport
MOU	Memorandum of Understanding
MTRA	Multimodal Transport Regulatory Authority
NAA	National Audit Act
NEMA	National Environment Management Authority
NCI	National Construction Industry
NDP	National Development Plan
NGO	Non-Governmental Organisation
NPG	New Public Governance
NPM	New Public Management
NPS	New Public Service
NRSA	National Road Safety Authority
NSC	National Safety Council
NSSF	National Social Security Fund
NTMP	National Transport Master Plan
OAG	Office of the Auditor General
OECD	Organisation for Economic Cooperation and Development
PFI	Private Finance Initiative
PFMA	Public Finance Management Act
Pg.	Page
PIMS	Public Investment Management System

PIP	Pubic Investment Plan
PPDA	Public Procurement and Disposal of Public Assets Authority
PPP	Public Private Partnership
PPP Unit	Public Private Partnership Unit
PV	Public Value
RAFU	Road Agency Formation Unit
RIC	Roads Industry Council
RSA	Road and Safety Act
RSDPs	Road Sector Development Programs
RUSS	Road User Satisfaction Survey
SANRAL	South African National Roads Agency Ltd
Sec	Section
SPE	Southern Bypass Expressway
SPV	Special Purpose Vehicle
SSA	Sub-Saharan Africa
TPA	Traditional Public Administration
TPS	Traditional Public Sector
TSDP	Transport Sector Development Program
TSWG	Transport Sector Working Group
UACE	Uganda Association of Consulting Engineers
UCICO	Uganda Construction Industry Commission
UGX	Ugandan Shillings
UIPE	Uganda Institute of Professional Engineers
UNABCEC	Uganda National Association of Building & Civil Engineering Contractors
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNRA	Uganda National Roads Authority
UK	United Kingdom
URF	Uganda Road Fund

USSRI	Uganda Road Sector Support Initiative
VFM	Value For Money
VVIP	Very Very Important persons
WHO	World Health Organisation

1 CHAPTER 1: INTRODUCTION

1.1 AN OVERVIEW OF THE SOCIAL AND ECONOMIC TRANSFORMATION OF UGANDA

Uganda is a landlocked country in the Eastern part of the African continent occupying a total area of 241,550.7 square kilometres, and borders South Sudan to the North, Kenya to the East, Tanzania to the South, Rwanda to the South West, and Democratic Republic of Congo to the West. The country's Gross Domestic Product (GDP) stood at 3.9% and about 7%, for the financial year (F/Y) 2017/2018 and for the last two decades respectively (National Budget Speech F/Y 2018/2019; World Bank, 2017:vi & 42;), and annual inflation averages 7% recovering from 0.3% GDP and 240% inflation rate of 1986 (Ggoobi, 2016:7). Household poverty reduced from 56% in 1993 to 31.8% (by international standard of US$ 1.9 per day) and 19.7% (by the National poverty line standard of less than a dollar) by 2016 (World Bank, 2017:21; Ggoobi, 2016:8). Furthermore, life expectancy improved from 45.7 to 60.3 years for males and 50.5 to 64.3 years for females, between 1991 and 2015 (World Health Organisation-WHO, 2017).

Notwithstanding Uganda's improvement in economic and social outlooks over the years, public infrastructure as a locomotive for development has an annual investment and financing gap of US$1.4 billion (bn) (about 6% of GDP) and US$0.4 million (m) respectively, and loses approximately US$300m in infrastructure inefficiencies and US$1.2bn in transport costs annually (World Bank, 2017:22&24; Kyamugambi, 2017:27). Compared with the best and average performing economies of the world, Uganda underperforms at about 50% and 25% in public investment respectively (Roehler, Charaoui, Darcy, Khasiani & Navarro, 2017:10). Against this backdrop, and given that the government envisages to "transform the country from a peasant to a modern and prosperous society by 2040" (Uganda Vision 2040: xiv), this study argues that Uganda can only realize such development aspirations through sustainable public infrastructure investment practices, especially in road infrastructure.

1.2 BACKGROUND TO THE STUDY

Byamugisha and Basheka (2016:2) reviewed three empirical studies; one conducted on 136 countries that included African countries, the other two on Japan and China respectively, and concluded that the volume and quality of physical infrastructure positively affect growth. Globally, as Tachiwou and Hamadou (2011:132) noted, countries that have efficiently constructed and expanded their road infrastructure have had tremendous improvement in economic growth, development and social welfare. As such, road infrastructure development through its direct and indirect effects has a bearing on sustainable development (Tripathi & Gautam, 2010:135).

Although roads are the main means of transport in Africa, a huge road infrastructure deficit exists on the continent (Ondiege, Moyo & Verdier-chouchane, 2013: 82). For instance, in 2011, 52.8% of Africa's road network was unpaved, making it difficult for people to easily access social services such as education, health and to engage in economic activities such as agriculture, industrial production, tourism and trade (Ondiege *et al.*, 2013: 82). Aigbavboa, Liphadzi and Thwala (2014:101) commend public private partnerships (PPPs) for having the potential of "alleviating infrastructure backlogs in developing countries". In a study titled "(de) politicization dynamics in PPPs", Willems and Van Dooren (2016:203) refer to PPPs as a new and neutral procurement modality for delivering public services. This involves greater private sector participation in designing, constructing, financing, operating and maintaining greenfield public infrastructure or operating brownfield facilities to satisfy public needs (Bayliss & Van Waeyenberge, 2018: 577; Alinaitwe & Ayesiga, 2013:2). As a policy instrument, therefore, PPPs reform procurement and service delivery for public agencies to leverage from private sector resources and efficiencies (Farquharson, Torres de Mästle & Yescombe, 2011; Yakubu & Anigbogu, 2016:61). In return, the public sector obviously extends business to private companies, but also supports the private sector in difficult business times, especially during credit market failures and stock market downturns (Hodge, 2009:11).

In Uganda, the road sub sector provides the most dominant transport mode carrying over 90% of the country's passenger and freight traffic, and works as the only means of transport for the rural communities (World Bank, 2014). Recognising the critical role the road sub sector plays towards economic and social development, over the years, the government has prioritised road infrastructure development during national budget sector allocations. For instance, in the F/Ys 2014/2015, 2015/2016, 2016/2017, 2017/2018 and 2018/2019 the transport sector was allocated 15.9% (UGX 2,389.37 bn), 18.2% (3,328.79 bn), 18.7% (3823.8 bn), 20.8% (4,587.3bn), and 20.3% (4,786.62 bn) of the national budget respectively. As the budget for the transport sector remains the biggest and keeps increasing, in turn other sectors experience budget cuts. Annually, about 87% of the transport sector budget is channelled towards the development and maintenance of roads (computed from the Ministry of Works and Transport Sector Budget Framework Paper F/Y 2017/18: 1-2).

Despite the government's prioritization of road sub sector investment, most of the road infrastructure remains substandard, unaffordable, inaccessible, costly, dissatisfying, and with high levels of accidents and travel times (Foster & Ranganathan, 2012; World Bank, 2014; Muhwezi & Ahimbisibwe, 2015:77). The slow development of the road infrastructure has often been attributed to government's budgetary constraints and procurement obstructions (Ministry of Finance, Planning and Economic Development-MFPED, 2015). For instance, ordinary road projects experience;

- delays in terms of completion or procuring a contractor due to administrative reviews, non-compliance with design requirements and court cases (Uganda National Roads Authority-UNRA, 2014; Public Procurement and Disposal of Public Assets Authority-PPDA, 2014; Ministry of Works and Transport-MOWT, 2015).
- poor workmanship and abandonment of construction works due to awarding contracts to incompetent contractors or construction firms having multiple running contracts with both UNRA and Local Government agencies (Uganda Debt Network, 2013).
- mismanagement of funds evidenced by unnecessary requests for extra funding and the payment for activities that are never executed (Office of the Auditor General-OAG Annual reports, 2010 & 2011).
- inadequate funding and low absorption of funds allocated for road infrastructure development (Achola, 2016: 1-12), and
- corruption scandals. A case in point, in the F/Y 2014/2015, the government lost UGX 18 bn, UGX 350 bn, UGX 250 bn and UGX 250 bn meant for the construction of Kanoni-Sembabule, Entebbe-Zana Express highway, Mukono-Katosi and Kawempe-Kafu roads respectively (Uganda National NGO Forum, 2015).

In line with the above assertions, to Bogere, Kabasweka, Kayabwe and Achola (2014:35) most of the road development problems in Uganda have a link with procurement. Quantitatively, Uganda loses about UGX 300bn in procurement malpractices (Global Witness, 2010, as cited in Mawejje & Bategeka, 2013:21), and globally, procurement bribes alone have been found to inflate contract values or item prices by 10-15% (Kenny, 2006:5). Since the World Bank (2012) maintains that Uganda spends over 55% of the national budget on procurement, it makes sense to state that a well-managed procurement system is central to solving most of the road development deficiencies in the country.

In an effort to address infrastructure development challenges, the Government of Uganda enacted the PPP Policy and the PPP Act in 2010 and 2015 respectively. The PPP system is an alternative procurement option to the Public Procurement and Disposal of Public Assets Act of 2003 (as amended 2014). Public private partnership reforms, according to Siemiatycki (2013:6-7) include competitive contracting and performance based contracts, private sector involvement in policy formulation, staff secondments and private sector contracting, increased flexibility in labour contracts, raising private capital to finance public investments, and treating service users as customers. This is in addition to transferring of infrastructure planning and provision to agencies that function more like private businesses, and employing independent regulators to oversee industry competitiveness, pricing, and service quality. Following the enactment of a PPP policy and Act, a pipeline of six PPP pioneer road projects was proposed, though with an ambitious construction completion time of 2022 (Kasaija, 2015). Martin, Lawther, Hodge and Greve (2013:15) assert that “the application of PPPs for transport

infrastructure development is a generally accepted tool of governance in many countries". Critical to Uganda would be drawing lessons from the experiences of other nations (Rao & Vokolkova, 2007).

Given that PPP is one of options available to governments in the delivery of public infrastructure, the Commonwealth Secretariat provides assessment criteria for determining the appropriateness of a project as a PPP (Yong, 2010). First, does the project offer value for money to the public sector? Second, does the project economics add up and is it bankable? Third, is a PPP enabling environment available? Fourth, is the sector of the economy suitable for PPPs? Fifth, is the proposed infrastructure of strategic importance to the country? Based on such criteria, the success of a PPP project is fundamentally dependent on the maturity of a country's PPP operating environment. As such, the market structure of a sector must create conditions for the private sector to operate, regulatory bodies should be competent to provide effective safeguards, and public authorities should be skilled to prepare a pipeline of bankable PPP projects (World Bank Group, 2012). In addition, there must exist credible institutions and effective regulations to foster sound business practice, effective contract enforcement, innovation and market competition, strong legal systems, a stable and clear policy environment, and good capital markets (McKibbin & Henckel, 2010).

Building on the above narrations, the adoption of PPPs for developing road infrastructure tasks the Ugandan government to fast track compliance with best practices. Without a doubt, proven practices deliver desired performance to the government, and reasonable returns to the private companies (Airoldi, Chua, Gerbert, Justus & Rilo, 2013:8). Ong'olo (2006) suggests PPP best practices to be transparency, public accountability, public management, sustainable development, dispute resolution, and safety and security. Martin *et al.* (2013) recommended that PPP best practices are found in the functions, size and complexity of the project, structured process, stakeholder consultation and support, dedicated PPP Units, risk assessment and allocation, value for money analysis, special purpose vehicle, project financing, procurement, and contracting. Further to this, according to Rothballer and Kim (2013:3), PPP projects should be selected and prioritized based on: a country's vision and long-term plans, a rigorous project preparation process, a life-cycle economic valuation, a bankable feasibility study, a balanced risk allocation and regulation, and a conducive enabling environment.

Since the government of Uganda does not have enough resources and competencies to meet the necessary road investment for the current and future generation, the involvement of the private sector through long-term partnership arrangements may sustainably bridge these gaps. However, Eggers and Startup (2006:2) warn that "without taking the PPP as a true partnership, and adopting a tailored approach that suits the relative uncertainty and scale of the projects at hand, governments are likely to repeat the errors of those before them". The implication is that the Republic of Uganda may realize its road development ambitions, if it progressively improves PPP environment, makes best use of the

available public service delivery models, and continues to innovate and learn from the successes and failures in the country and beyond.

1.3 PROBLEM STATEMENT

Mixed reactions have been raised about the relevance of PPP arrangements as a procurement model for delivering public infrastructure globally (Boardman, Greve & Hodge, 2015:442; Osei-Kyei & Chan, 2017:113). Some studies indicate that PPP projects are delivered on time and in budget, and are cheaper than conventional projects (Allen Consulting Group, 2007:32; Hodge & Greve, 2009:35; Babatunde, 2015:4; Osei-Kyei & Chan, 2016:174-179). Meanwhile others suggest that PPP projects underperform compared to conventional projects, because they are often delivered beyond budget and completion time, and increase public debt and taxes for the citizens (Hodge & Greve, 2009:35; Ball, Heafey & King, 2007:307; Hodge & Greve, 2010:12; Blanc-Brude, Goldsmith & Valila, 2006:33; Romero, 2015:6; Babatunde, 2015:4; Osei-Kyei & Chan, 2016:174-179). The cited studies, which are a collection of empirical research conducted mainly in countries from Africa, Europe and the United States of America (USA), confirm the existence of a mixed performance and view of PPPs.

In light of the findings from studies above, it becomes difficult to predict the trend Uganda is likely to follow as it adopts PPP mechanisms to develop road infrastructure. Villanueva (2015:133) attributes uncertainties and compromised PPP performance to: complex PPP project matters and contracts; numerous roles government adopts in PPP arrangements; the fact that PPPs is one option to choose among other service delivery alternatives; differing PPP agendas of the private and public partners; the long term contracts ("incomplete contracts" problem); and, the democratic aspects of participation, transparency, accountability and control which have not been institutionally resolved. This study, therefore, seeks to investigate both the international and national PPP environments to suggest the best PPP governance approaches for developing road infrastructure in Uganda.

1.4 RESEARCH QUESTION

The critical question being addressed by this study is how can Uganda govern public private partnerships to ensure sustainable road infrastructure development?

1.5 RESEARCH AIM

To construct a suitable Public Private Partnership governance model for developing road infrastructure in Uganda.

1.6 RESEARCH OBJECTIVES

- To provide an overview on the understanding and contribution of infrastructure development and public private partnership;
- To analyse the key elements of an effective public private partnership governance structure for infrastructure development;
- To evaluate international public private partnership experiences and practices in the road sub sector;
- To examine the impact of road sub sector reforms on road infrastructure performance in Uganda;
- Discuss the legal and policy frameworks that support public private partnership road investment projects and programs in Uganda;
- To empirically investigate the suitability of the public private partnership environment of Uganda for road infrastructure development.

1.7 SIGNIFANCE OF THE STUDY

Firstly, the study will assist policy makers in developing and implementing effective institutional, regulatory, legal and market frameworks for PPP undertakings in the road sub sector in Uganda.

Secondly, the study bridges the knowledge gap in the existing PPP literature since little research has been written about PPPs in Uganda. Most importantly, among the few scholars that focus on PPPs in Uganda, such as Alinaitwe (2005 & 2013), Ndandiko (2006 & 2010); and Nsasira, Basheka and Oluka (2013), none has comprehensively analysed the PPP environment or developed a suitable PPP governance model for Uganda's road sub sector. Therefore, the provision of recommendations out of a comprehensive analysis of Uganda's PPP environment and a suitable PPP governance model for developing road infrastructure in Uganda, become the two major contributions of this study.

Thirdly, much of the debate on road infrastructure development has mainly focussed on how to raise funding for infrastructure projects while neglecting the broader public governance dimensions (Organisation for Economic Co-operation and Development-OECD, 2015:1). This study uses the public governance approach through the PPP lens to bridge the aforementioned gap.

Fourthly, the study advances the PPP phenomenon as a procurement model - a perspective that has outrightly been missing and limited in literature and practice respectively, because they (PPPs) have often been viewed from the perspectives of urban regeneration, public policy, infrastructure, development, language game, moral regeneration, and financing.

1.8 RESEARCH METHODOLOGY

This section provides, at a glance, a summary of how the research was conducted, but a more comprehensive description of the research methodology employed to undertake and accomplish the study is provided in chapter 7.

With the intention of providing answers to the research question and objectives highlighted in sections 1.4 and 1.6 respectively, and in order to achieve the research aim (highlighted in section 1.5) to address the problem (described in section 1.3), it was indeed very important to choose an appropriate research methodology. The study adopted an exploratory research design, which necessitated the collection and analysis of data to be qualitatively executed. Three data collection methods, namely interviewing, literature review and documentary analysis were used. For both literature review and documentary analysis methods theoretical sampling was used to determine the most appropriate documents to use for the study, while the interviewing of respondents had to be purposively/or and conveniently conducted.

Upon completion of collecting data, the data had to be analysed. The data collected through literature review and documentary analysis was manually analysed using the systematic analysis approach, while data from interviews was electronically analysed (with ATLAS ti software) using the content analysis approach. In order to make sense of the data collected and analysed, both deductive and inductive reasoning (i.e. abductive logic) were employed alongside ontological, epistemological, axiological and rhetorical research philosophies. Finally, the aforementioned processes culminated into "a suitable public private partnership assessment and management governance model for developing road infrastructure in Uganda" which was constructed based on the findings from the interviews (i.e. empirical chapter), and supplemented with findings from literature review and documentary analysis chapters.

1.9 LAYOUT OF THE DISSERTATION

Chapter 1: Introduction of the study

This chapter covers the background to the study, problem statement, research aim, research question, objectives of the study, significance of the study, and the structure of the thesis.

Chapter 2: An Overview of Infrastructure Development and Public Private Partnerships

The chapter reviewed literature on the understanding of infrastructure development, PPPs, the contribution of PPPs to infrastructure development, and analysed theories relevant to PPPs.

Chapter 3: Key Elements of an Appropriate Public Private Partnership Governance Structure

This chapter critically examines PPP best practices (PPP principles), critical success factors, stakeholder management, risk management, and PPP maturity.

Chapter 4: PPP International Experiences and Practices in the Road Sub Sector

This chapter evaluates international PPP road cases, examine the management of PPP operations in other countries, analyses tolling in the road sector and discuss the effects of the financial crisis on PPP performance.

Chapter 5: The Evolution of the Road Sub Sector and Future of Public Private Partnership Projects in Uganda

This chapter provides the overview of road development in Uganda, the state of the roads and the physical performance of the sub sector and a brief description of the pioneer PPP road projects lined up for future implementation. Finally, it assesses the road reforms and their impact on the state and performance of the road sub sector.

Chapter 6: Legal and Policy Frameworks Applicable to Public Private Partnership Road Projects in Uganda

The chapter discusses pure PPP legal and policy frameworks, and other legal and policy frameworks (which are road specific or generic in nature) that support PPP arrangements.

Chapter 7: Research Methodology

The chapter provides a description of the research design, approaches, data collection methods, procedures, research instruments, data analysis and presentation, and covers the analysis of the demographic features of the respondents.

Chapter 8: Presentation and Discussion of the Findings of the Empirical Study

The chapter investigates the suitability of the public private partnership environment of Uganda for road infrastructure development. Presentation and discussion of the findings were conducted concurrently in the chapter.

Chapter 9: Constructing a suitable public private partnership governance model for developing road infrastructure in Uganda

A suitable public private partnership assessment and management governance model was developed based mainly on the findings from the interviews, and supplemented with findings from the review of literature and analysis of documents. Finally, the applicability of the developed model was discussed.

Chapter 10: Conclusion and Recommendations

The chapter provides an overview of the research contribution, summary of findings, recommendations, limitations, conclusion, and areas for further research.

2 CHAPTER 2: AN OVERVIEW OF PUBLIC INFRASTRUCTURE DEVELOPMENT AND PUBLIC PRIVATE PARTNERSHIPS

2.1 INTRODUCTION

Over the last three decades, the governments' monopoly in the development of public infrastructure has been broken. Currently, many countries are facing budgetary constraints and pressure from the public to expand and improve public facilities and services (Shetterly, Duan, Krishnamoorthy, Kronenburg & Loutzenhiser, 2012: 997). According to Airoldi *et al.* (2013), globally there is a $1-1.5 trillion annual gap against the necessary $4 trillion annual infrastructure investment up to 2030. This necessitates governments to collaborate with the private sector in order to bridge the financial and management gaps. Among the models of private sector involvement such as, contracting-out, privatization and PPP, the latter has been highly recommended for public infrastructure development. In both developed and developing countries, it has increasingly become common practice to undertake road construction, financing, maintenance and operations through PPP arrangements. However, this is a new approach to Uganda, since previously, the government relied heavily on the use of government funds and capital financing from intergovernmental organisations.

With the current government's resolve and support for PPPs in the country, the overall aim of this study is to construct a suitable PPP governance model for developing road infrastructure in Uganda. In particular, this chapter seeks to address the first objective of the study, which is about "the understanding and contribution of PPPs for infrastructure development". The discussion of the chapter positions infrastructure development (specifically roads) in the African context, broadly critiques PPPs and suggests appropriate theories for the governance of PPPs in the provision of public services. The chapter is organised in four main themes: public infrastructure development for service delivery, PPPs for infrastructure development, theoretical perspectives in the governance of public service provision, and the analysis of the common themes. The main themes of this chapter are unpacked as follows.

2.2 PUBLIC INFRASTRUCTURE DEVELOPMENT FOR SERVICE DELIVERY

This section presents the meaning of public infrastructure, and explores public infrastructure investment in Africa with a key focus on infrastructure investment gap and the impact of road infrastructure on service delivery.

2.2.1 Understanding of Public Infrastructure

Public infrastructure refers to facilities that support the effective functioning of a nation's economic and social activities (Yescombe, 2007:1). Public infrastructure can either be economic infrastructure, which

is essential for day-to-day economic activities such as transportation facilities (for road, rail, water, air) and utility networks (for water, sewage, electricity), or social infrastructure, which is essential for the structure of society such as schools, hospitals, libraries and prisons (Yescombe, 2007:1). Each of the two infrastructure categories can be either "hard" or "soft" in nature, where hard infrastructure refers to provision of physical facilities such as roads, and soft infrastructure refers to provision of services such as street cleaning and lighting, transporting, and traffic lights control (Yescombe, 2007:1). From a very different orientation, Byamugisha and Basheka (2016:2) refer to soft infrastructure as also including "policies, regulatory and institutional frameworks, governance mechanisms, systems and procedures, social networks, transparency and accountability, financing and procurement systems".

Mainly for social and political reasons, public infrastructure development becomes a sole mandate of the public sector (government), while the private sector only participates behind the scenes because of market failures and lack of profitability (unless executed as a PPP) (Sarmento & Renneboog, 2016:96). Key features that differentiate public infrastructures from other forms of infrastructure include: they are natural monopolies; they are associated with positive and negative spill overs; they require heavy investment in both capital, sunk and running costs; it is difficult or undesirable to exclude non-payers from using them; they are indispensable facilities that support a wide range of products and services; they provide integrated and networked services that bind economic and social activities together (Grimsey & Lewis, 2004:27-29; OECD & ITF, 2008:17; Sarmento & Renneboog, 2016:96). As aforementioned, in the recent past the private sector has gained greater responsibility in the development of public infrastructure through PPP arrangements. A public infrastructure qualifies for PPPs if it: is a fixed investment (with a long duration in construction and operation); requires a high initial investment; is only financially viable over a long period, and; the public sector is the guarantor but the provider is the private sector (Sarmento & Renneboog, 2016:96).

In summary, apart from Byamugisha and Basheka's conceptualisation of soft infrastructure, and for purposes of maintaining consistency about the understanding of public infrastructure, we adopt Yescombe's (2007) definition together with Sarmento and Renneboog (2016), Grimsey and Lewis (2004), and OECD and ITF's (2008) descriptions throughout the study. After having provided a clear meaning of public infrastructure, how it differs from other types of infrastructure, and what qualifies a public infrastructure for PPPs, the next subsection provides a brief presentation on public infrastructure investment in Africa.

2.2.2 Public Infrastructure Investment in Africa

While Africa needs approximately US$93 billion annually for infrastructure investment in order to meet its growth and development goals **(**Ondiege *et al.*, 2013:70), its actual annual infrastructure investment stands at US$45 billion (Draper, Grant, Kingombe, & Willem te Velde, 2011:4). As such, Africa is the

least productive and competitive continent of the world (Ondiege *et al.*, 2013:69), largely because of inadequate and underdeveloped infrastructure. For instance, only 30 % and 34% of Africa's population have access to electricity and roads respectively, compared with the 70-90% for electricity and 50% for roads in other developing continents (Ondiege *et al.*, 2013:76). Africa's most pronounced development challenge relates to an inclination to constructing new over the maintenance of existing infrastructure, yet "investing in the maintenance of existing facilities bear more fruits over spending on creating new facilities" (Sharma & Vohra, 2009:76). Given that, "without adequate maintenance, infrastructure deteriorates quickly and becomes unsustainable" (Ondiege *et al.,* 2013:70), it explains why EU countries spend about 70% of public investment on maintenance and upgrade of past infrastructure investments (OECD, 2015:4). Therefore, African countries should transition from practicing corrective measures to more proactive/ preventive infrastructure development and maintenance means.

This subsection presented Africa's infrastructure gap and the main causes of this deficiency. The next subsection discusses the impact of road infrastructure in Africa.

2.2.3 The Impact of Road Infrastructure on Service Delivery in the African Context

Road infrastructure is critical for sustainable development**,** and provides a major means of transport for passengers and freight across the world. On average, roads account for over 90% of total freight and passenger movement in Africa (Biau, Dahou & Homma, 2008:3). Roads in Africa are a primary link between urban and rural areas, not only to boost trade, industrialisation and agricultural productivity, but also for social services accessibility. In this regard, road network has a positive impact on economic and social development. According to Sharma & Vohra (2009:76), for each additional US$0.02 million investment in roads, 123.8 people would be raised above the poverty line. Good roads increase both the number of new firms and the market size of a location resulting in lower prices and higher productivity. For example, a new rural road from Daleti to Oda Bildingulu in Ethiopia provided incentives for farmers, which increased sesame production six fold over the F/Ys 2003/04-2007/08 **(**Ondiege *et al.*, 2013:74). The implication is that improved and well maintained road networks minimise damage, spoilage and mishandling of in transit goods (Ferrantino, 2009:6), and reduce traffic congestion, user transport charges and vehicle operating costs, travel duration, and support safe and efficient movements (Sharma & Vohra, 2009:85). Good roads also encourage increased investment in both commercial and personal vehicles (Ferrantino, 2009:6). This increases supply of agricultural and industrial products in urban and rural areas respectively, thereby reducing commodity prices and facilitating productivity and living standards.

On the other hand, poor road maintenance increases vehicle operating costs and makes maintenance of existing roads in the long run economically inefficient. Ferrantino (2009:6) argues that, "a paved road maintained at regular intervals for 15 years would cost about US$60,000 per km while if it is allowed

to deteriorate over the same period it would cost about US$200,000 per km to recover it". In Africa, there is too much overloading of trucks, which raises the maintenance costs and shortens the life expectancy of roads. For instance, in Uganda, the overloading rates are close to 55% (Ondiege *et al.*, 2013:83). Africa's road infrastructure is underdeveloped and poorly maintained compared to other developing countries. The neglect of effective maintenance of road infrastructure in Africa has not only become a continental but also a global concern. Out of the 2 million kilometres of Africa's roads only 27.6% are paved (against 43% for South Asia) (Biau *et al.*, 2008:3).

The poor state of the roads increases operational costs and production losses. For instance, a survey conducted in Kinshasa showed that transportation costs were on average two times greater on earth-surfaced roads than on paved roads (Biau *et al.*, 2008:3), while, in Ghana, about 15-20% of the fruits delivered by out-growers on feeder roads are rejected by nucleus farms due to in transit caused damages (Ferrantino, 2009:6). The underdevelopment of the road network has also resulted in severe traffic congestion and accidents. According to Ondiege *et al.* (2013:84) traffic congestion is estimated to cause direct loss of time and productivity at an annual cost of US$19 billion in Lagos, US$0.89 billion in Dar es Salaam, and US$0.57 billion in Nairobi. In 2016, the world health organisation (WHO) estimated that about 1.2 million people die and 50 million are seriously injured each year in road traffic accidents. For example, Uganda has one of the worst road safety records in Sub-Saharan Africa, with an average rate of 45 fatalities per 10,000 vehicles (Ondiege *et al.*, 2013:83).

In addition, accessibility to the road network is uneven, with rural areas largely underserved (Ondiege *et al.*, 2013:82), since 70% of Sub-Saharan Africa's (SSA) rural population lives more than 2 km away from an all-weather road (Wohl, 2009:1). This makes the use of motorized vehicles socially and economically unfeasible, especially during the rainy seasons. For example, in Chad, during the rainy season, teachers and students cannot get to schools and the sick have difficulty reaching the limited medical facilities because of poor quality roads (Jabara, 2009:7). More so, when road infrastructure is not user friendly, drivers tend to take alternative routes that often require longer travel times (Wohl, 2009:5), something that not only creates delivery delays but also increases overall transport costs. The prolonged delivery problem is further exacerbated by the very low maximum driving speed, as vehicles slow down to avoid potholes or navigate uneven terrain (Wohl, 2009:5).

Given Africa's road infrastructure development challenges outlined above, we argue that facilitating collaborative relationships between government and the private sector through PPPs is an attractive alternative to increase and improve the provision of infrastructure facilities and services (Shendy, Kaplan & Mousley, 2011: ix; United Nations, 2011:1). This introduces innovative sources of funding and better competencies for public investment and infrastructure management. Therefore, the next section discusses the PPPs as a means for public infrastructure development.

2.3 PUBLIC PRIVATE PARTNERSHIP FOR INFRASTRUCTURE DEVELOPMENT

Starting from the early 1990s, to date PPPs continue to gain popularity in the development of public infrastructure due to the consistent public sector fiscal constraints, management reforms, and the changing role of government in service provision from "an active state to an enabling state" **(**Reim, 2009:2). This form of public service delivery transforms government departments from being owners and operators of public infrastructure, to becoming procurers of services from the private sector through long-term contracts that clearly stipulate the responsibilities of each party (Kalpana, 2014a:5). Based on this background, this section presents the understanding of PPPs from various definitions and strands in literature, and discusses the contribution of PPPs and their challenges in the development of public infrastructure. This section serves two main objectives:

- To provide concrete meaning to what PPPs are in order to avoid their misconstruction in research and policy arenas; and
- To argue that the positive contribution of PPPs can only be realized if the operational challenges are suppressed.

2.3.1 Understanding of PPPs through Definitions

With enormous literature available about PPPs, there is still a lot of ambiguity on what PPPs really are. This subsection interrogates the different PPP definitions and suggests key issues that can assist in providing effective meaning to the PPP concept. As the saying goes, "no one size fits all", the suggested common elements for defining PPP may not wholly apply to each type of PPP, but provide a benchmarking standard upon which the assigning of wrong meaning to PPPs in both research and policy undertakings can be avoided. The details of the PPP interrogation follows below.

Farquharson *et al.* (2011:11) defines PPPs as "long-term contracts between the public entity and the private firm, where the private sector party usually agrees to; design and build, expand, or upgrade the public sector infrastructure; assume substantial financial, technical, and operational risks; receive a financial return through payments over the life of the contract from users or the public sector, or from a combination of the two; and usually return the infrastructure to public sector ownership at the end of the contract". This definition signifies that:

- Project tasks must be bundled into a single or bigger contracts in order for the private partner to bear substantial project risks and management responsibilities;
- Projects together with their contracts must have a long life span;
- Payment to the private partner must come from direct users of the facilities or, where deemed necessary, by the government itself;

- Project contracts need to explicitly state how the transfer of infrastructure ownership and responsibilities should be handled at the end of the contract.

To Koppenjan (2005:137) PPPs are a form of structured cooperation between public and private parties in the planning, construction and/or exploitation of infrastructural facilities in which they share or reallocate risks, costs, benefits, resources and responsibilities in a specific project. However, Koppenjan's definition is criticised for being function-specific and disregarding informal and long-term relationships, and failing to draw a line between organisational and inter-organisational objectives, values and visions within PPP policy networks (Hodge & Greve, 2007:546; Brinkerhoff & Brinkerhoff, 2011:3). Koppenjan's definition was later strengthened by Zhang, Gao, Feng and Sun (2015:499) who viewed PPP as "a long-term contractual arrangement for the cooperation and coordination of government, investors, contractors, end users, and all other stakeholders that are involved in both the institutional environment and organizational processes throughout the whole development and operation cycle". This implies effective collaborations cannot take place in short-term contracts, and "rules for good order" at both macro and micro levels are a prerequisite for PPP arrangements.

According to Grant (1996, as cited in Alinaitwe & Ayesiga, 2013:2) cooperation (as suggested by Zhang *et al.* above) must be based on the best expertise of each partner to deliver clearly defined public needs. With a similar perspective, Roberts and Siemiatycki (2015:781) and Kalpana (2014a:17) argue that, the essence of any partnership oratory is in the notion of "collaborative advantage", where individuals from multiple organisations and disciplines work together to achieve results that cannot be realized in the absence of combined efforts. Consequently, effective PPPs enable accessibility to key hard resources (money, materials) or soft resources (managerial and technical skills, information, contacts, credibility, legitimacy and political support) that may be lacking or insufficient within one actor's reserves to achieve public service objectives (Brinkerhoff & Brinkerhoff, 2011:4). However, critics of PPPs argue that, though governments recognise the need for mutual commitment and cooperation in their PPP policy documents, in practice, PPPs are always transformed into "contracting out schemes" since private partners are rarely allowed to innovate beyond the explicit contract provisions (Teisman & Klijn, 2002:204; Roberts & Siemiatycki, 2015:781-782). More so, the interdependence between partners outside the formal contract is minimal (Hodge & Greve, 2010; Teisman & Klijn, 2002). This results in loss of flexibility, yet PPP partners are expected to respect and adapt to changes in the operational environment in order to mitigate against negative significant impacts on the way public services have to be provided over time (Boardman *et al.*, 2015).

On the basis of their long-term nature and future uncertainty, PPP contracts remain incomplete, hence requiring effective partnership behaviour among all the partners to facilitate continued commitment. This is in agreement with Williamson (1985), and Hodge and Greve's (2007) argument that, "not

everything can be written into a detailed contract under long term transaction commitments". As such, PPPs working arrangements should be based on mutual commitment over and above what is expressed in any contract (Bovaird, 2004:200). Upholding such partnership behaviour enables improved provision of public infrastructure and services through mutual objectives, devising ways of resolving disputes through team approach, and enlisting the support of all parties for continuous improvement, measuring progress and sharing gains.

From the discussion above, we concur with the postulation of Zhang *et al.* (2015:498) that integrating contractual, partnership and function specific perspectives is an effective way of defining the PPP concept. The contractual perspective focuses mainly on formal and legal dimensions of the relationship that binds the government and private sector together. The partnership perspective emphasizes the social dimension of the relationship that is characterised with mutuality, commitment and trust. The function-specific perspective is task-oriented and uses the project lifecycle approach in executing and shifting (fully or partially) some of the project activities such as financing, designing, constructing, maintenance and operation from the public to private partners.

In summary, common elements that define PPPs are public and private sector (inter-organisational) interactions, risk and responsibility sharing or shifting, competitive dialogue, bundling of construction and operation, partnership based long-term contracts in a project setting, output and outcome based specifications that encourage innovation, institutional systems and organisational processes, service delivery objectives/purpose, payment mechanism (through users and government), and use of private finance in the development of public infrastructure and service provision. In addition to the PPP understanding made in this subsection, the next subsection will provide meaning to the PPP phenomena in a different but supplementary manner, by examining how different scholarly materials categorise PPPs.

2.3.2 Understanding of Public Private Partnerships through Literature Classifications

This sub-section presents the understanding of the PPP concept from various perspectives that appear in literature. A perspective "in this context is not a specific type of research with a specific methodology, ontology and epistemology, rather it refers to general patterns and tendencies in literature" (Weihe, 2008:430). As Wettenhall (2003:98) posited, "there have been previous efforts at classifying PPP arrangements but there is much more to be done". Therefore, the purpose of this section is to discuss eight PPP strands that provide meaning to the PPP terminology from various research collections to enable future researchers, policy makers and practitioners to use and apply PPPs effectively. Below is the outline and discussion of each PPP perspectives.

2.3.2.1 The urban regeneration perspective

The urban regeneration approach focuses on urban economic and social revitalization through cooperation between private businesses and local governments (Weihe, 2008:431). Partnerships of this nature begin with business transactions between companies or business leaders and are later extended to include the public and third sector actors, who collaboratively work together to respond to urban crises such as high unemployment, high crime rates, poor sanitation and a deteriorating revenue base (Weihe, 2008:431). However, sharing of the roles among the partners may vary on a case-by-case basis. The features of co-production, risk-sharing, and principal-principal relationships (Weihe, 2008:432) mainly define this type of partnership. Interactions among partners result from mutual interests rather than force, since each participant is viewed as a principal, suggesting an arrangement of equals. This is very different from the dominant Principal-Agent partnership behaviour, where parties often act opportunistically. However, this perspective has two major weaknesses. Firstly, literature remains silent on how cooperation in a principal-principal relationship is executed, whether it is through contractual or non-contractual arrangements or both. Secondly, it over assumes that PPPs only work for urban areas, yet they equally apply to all geographical public service delivery points.

2.3.2.2 The policy perspective

Unlike the Urban regeneration approach that focusses on specific collaborative projects, the Policy approach focusses on describing and analysing the institutional set up of public private cooperation in different policy fields (Weihe, 2008:432). According to Brinkerhoff and Brinkerhoff (2011:6) and Osborne (2000:1) PPPs have become governance tools that seek to design, advocate for, coordinate and monitor public policies at sectoral, national, and/or global levels. While the designing and implementation of PPP policies should be based on equity and pluralist representation, opportunities for all, commitment, participation and transparency, according to Khanom (2009:12) these are often undermined by selfish interests of politicians, lobbying groups and bureaucrats, especially in developing countries. According to Brinkerhoff and Brinkerhoff (2011:6) an effective PPP policy is one that is specific on: the expertise and experience of partners; the state-society interest intermediation; responsiveness of the policy to particular societal groups; the ability to build consensus among policy constituencies; institutional relationships of different parties; and the legitimacy and 'standing' of the partners (i.e. whom do they speak for and with what authority?).

In summary, the PPP policy perspective focusses on policy design, policy networks, and the appropriate roles of public and private sector players in different policy settings. The approach seems to be more inclined towards PPP policies that have state, national, central and local government impacts.

2.3.2.3 The infrastructure perspective

Infrastructure approach is associated with PPP arrangements, where the private parties participate in the provision of public infrastructure and the delivery of public infrastructure-based services (Grimsey & Lewis, 2004:2, as cited in Weihe, 2008:432). Infrastructure PPPs "bring together governments and the private sector to design, finance, build, and operate infrastructure such as highways, ports, sewage and waste treatment facilities, telecommunications and electricity generation" (Brinkerhoff & Brinkerhoff, 2011:6) to improve the provision of public services.

The approach employs deregulation principles "to address the underinvestment in public assets to secure the long-term future of public services" (Ghobadian, Gallear, O'Reagan, & Viney, 2004:6). Although for a long time, infrastructure PPPs were being applied to only economic infrastructure (motorways, bridges, tunnels), they have now been extended to social infrastructure such as schools, hospitals, prisons and waste management (Grimsey & Lewis 2004:7, as cited in Weihe, 2008:434). However, this PPP perspective has been criticised for limiting government flexibility, and increasing inefficiency and investment spending. For instance, Brinkerhoff & Brinkerhoff (2011:6) argues that, financing of public infrastructure through user fees denies the poor and marginalised the right to access public services.

2.3.2.4 The development perspective

Proponents of this perspective view PPPs as a means of reducing poverty, social deprivation, corruption and environmental degradation to enable nations to achieve global development goals at sectoral, community, local and central government levels (Weihe, 2008:434). For instance, The Global Fund (a partnership initiative between governments, civil society, the private sector and communities) raises and invests nearly US$4 billion per annum to support programs aimed at fighting diseases such as AIDS, Tuberculosis and Malaria in affected poor countries (The Global Fund, 2016). From the United Nations' sustainable development goal 17 "partnership for goals", it is very clear that the world can achieve its development agenda mainly through partnerships and cooperation. In Canada, for instance, between 2003 and 2012, the delivery of public infrastructure through PPPs is estimated to have created 517,000 fulltime jobs, $32.2 billion in total income, $48.2 billion in total GDP, and $92.1 billion in total economic output (Casady, 2016:9). As such, PPPs support the broader societal objective of socio-economic development (Hodge, 2009:11-12). This perspective is mainly promoted by the third sector actors, especially intergovernmental organisations for the development of poor countries.

2.3.2.5 The language game perspective

According to Hodge and Greve (2007:547-548) and Linder (1999) the PPP phenomenon has become a language game with multiple grammars attached to its meaning. Scholars that share similar sentiments with the aforementioned writers, describe PPPs thus: "a practice of advancing the same policy but under a different and more-catchy name" (Greve, 2003:60); "just a fashionable word" (Kalpana, 2014b:12), "it's the latest chapter in the privatization book (Hodge, 2004), and "a privatization masquerade" (Kalpana, 2014a:10). In essence, promoters of the language game perspective suggest that governments name public projects PPPs when in reality they are implementing "contracting-out or privatization" contracts (Hodge & Greve, 2005a:7; Kalpana, 2014a:10). This often happens with governments that become unpopular because of gross mismanagement in contracting out or privatization of public facilities. In addition, the PPP language game has led governments in different countries to visualize PPPs in a conflicting and misleading manner. For example, "in Australia, PPPs and privatization are completely different policies, while in the UK, the HM treasury 2003 equates PPPs to privatisation" (Hodge & Greve, 2010:10). This example indicates how PPP policies can be classified to suit local political objectives and obscure meaning (e.g. the aforementioned UK example) rather than clarify and sharpen the understanding of the PPP phenomenon. No wonder PPPs have nowadays become a favorite expression when describing new institutional and contractual arrangements for governments (Hodge & Greve, 2009:34).

In conclusion, though the language game debate is critical in framing our understanding of PPPs, researchers and governments should be cautious with how they approach PPPs. It is obvious that PPP advocates will promote the policy positives while omitting the policy negatives, and the reverse is true for PPP adversaries. For instance, Hodge (2004:39) assert that PPP supporters assume PPPs are "a marriage made in heaven". This is in agreement with Kalpana's (2014b:13) argument that PPPs provide "public sector services efficiently and inexpensively, reduce pressure on government budgets, strengthen monitoring and accountability, and evoke business and investor confidence". Finally, in all honesty, we have to categorically state in this study that, while Sarmento and Renneboog (2016:97&99) crown privatisation a "public procurement modality" as well as insinuations of "PPPs for infrastructure privatization" by Li (2017:3), rather than being a public service delivery modality, in no way and by no means can privatization be a procurement modality.

2.3.2.6 The procurement management perspective

While literature has paid little or no attention to this perspective, in practice PPPs are real procurement management modalities. Scholars that have attempted to view PPP as a procurement only stop at either capturing the "word" procurement in the term PPP (e.g. "PPP procurement" or "PPP procurement option/alternative/modality") or defining it as a procurement phenomenon. Examples of such scholars

include: Farquharson *et al.* (2016); Alinaitwe and Ayesiga (2013); Allen Consulting Group (2007); Willems and Van Dooren (2016); Sarmento and Renneboog (2016); and Martin *et al.* (2013). The current study seeks to go further than a mere "definition" or just "wording" to advance through justification "PPPs as a procurement management perspective", and as "one of the most critical approaches" of PPP arrangements.

Since the 1980s, for some time now governments have been transforming the provision of public services through procurement devolutions. First was the direct government provisioning mode succeeded by outsourcing (public procurement), and more recently PPPs. None of the three aforementioned procurement modes replaces the other, though direct government provisioning seems to be slowly phasing out in preference for public procurement. While PPPs has taken shape, its usage remains low compared to public procurement because of the stringent and fundamental conditions that compel its use. Notwithstanding the dominance of public procurement, according to Reim (2009:3), PPPs remain a superior procurement mechanism to public procurement and direct government provisioning. This resonates with Weihe's (2008:433) assertion that, public procurement is less appropriate for developing complex and large public infrastructure facilities. Similarly, PPPs are principally less appealing to small and low investment procurements. In summary, small and low investment projects are more suitable for public procurement whereas big and heavy investment projects would be more suitable for PPPs.

In view of the above, PPPs are "now a new and extended way of procuring public services" that replace or complement outsourcing or privatization (Weihe, 2008:433; Linder, 1999:43; Hodge & Greve, 2007:545) in solving service delivery challenges beyond the full capacity of government. Uniquely, PPPs "alter business-government relations from the ethos of command and control regulation to trust and cooperation, from solving differences through litigation to negotiations, and from being adversaries to collaborators" (Linder, 1999:47), since each party is expected to extend different value to the partnership. Such interactions promote sharing of knowledge, skills, responsibilities and risks in a mutually acceptable and beneficial manner, unlike other procurement modalities. Subsequently, this inspires confidence in the private sector and propels public officers beyond the confines of outsourcing to promote private business growth.

From a public sector perspective, the ultimate goal for any PPP project concept is to procure a private sector contractor. The rest of the other project aspirations only come in to complement or are part of the procured contracts. Therefore, without procuring a private partner (contract), no PPP project exists, and consequently, no financing, designing, maintenance and operation tasks would be executed. In fact, according to Sarmento and Renneboog (2016:97) the various PPP forms - that is, Build Transfer Operate (BTO), Design Build Finance Operate (DBFO), Design Own Operate (BOO), etc., are "different

procurement systems". To make procurement realizable public officers must develop commercially attractive projects to have private for profit companies invest their capital and expertise in the development of public infrastructure. Finally, the main benefits of the PPP procurement mechanism to government include: minimised government financing and tax burdens, kickbacks and patronage; and public officers become more entrepreneurial, flexible and innovative in addressing public service delivery challenges (Linder, 1999). Conversely, in the private sector, instead of companies competing against one another, they rather jointly work together (e.g. under the special purpose vehicle (SPV) arrangement).

2.3.2.7 The moral regeneration perspective

Government provisioning is known for treating both the providers and recipients of public services harshly, since it conveys individual and community entitlements and privileges, or sanctions and punishments, based on either monetary or political support rather than eligibility (Linder, 1999:44). Linder (1999:44) believes change for the better can be engineered through properly organized PPP efforts. As a result, development of public infrastructure or service provision need to be moved towards market inspired traits of self-reliance, self-initiative, hard work, integrity, prudence, creative problem solving and participation in property holding and commercial enterprise. Furthermore, PPPs can relieve government of some of the project administrative responsibilities by moving public sector workforce to a more disciplined private sector labour market. Therefore, PPPs can serve as a means for effectively deregulating employment relations for unorganized work force (Supiot, 1996). Linder (1999:45) argues that the commercialization of public services is "less fraught with moral judgments and are thus less corrosive to the human spirit". Hence, allowing public servants to act like private sector managers has a valuable ethical effect. In conclusion, though government provisioning promotes virtues as well, PPP arrangements are the ones that foster virtues of the markets that are critical in addressing public service delivery governance problems.

2.3.2.8 The financial arrangements perspective

Many definitions for PPPs indicate financing as one of the key components that motivates governments to involve the private sector in the development of public infrastructure (Blondal, 2005; Webb & Paul, 2002; Savas, 2000; Evans, 2003; Campbell, 2001). For example, Campbell (2001, as cited in Khanom, 2009:152) partly defines PPPs as projects for financing public infrastructure. Khanom (2009:5) suggest that PPP procurement systems (e.g. Build Operate Transfer-BOT, BOO, and DBFO, etc.) each present a unique financing option for projects. For example, with the DBFO PPP model, the private sector takes up all the financing responsibilities for the designing, construction, maintenance and operation of infrastructure projects until the expiry of the concession period. In return, the private sector receive income from the operation of the developed infrastructure through government payments or direct user

charges such as road tolls. However, to make private sector financing initiatives realizable, public sector entities must structure projects that are attractive for private sector investment. In reality, PPP arrangements have become interventions for reducing pressure on government budget to deliver public infrastructure sooner than later (Linder, 1999:45; Khanom, 2009:5). To conclude, PPPs are a financing tool to the private sector through revenue collection during the operation stage, and to the public sector by leveraging private funding for public infrastructure development and service provision. As such, the private sector uses PPPs for profit making, while the public sector's main interest is in improving service delivery.

In summary of the issues discussed in this subsection, the eight PPP perspectives advanced cover a wide range of governance issues with different focus group territories, characteristics, mechanisms, and each with shared or different accountability implications. The aforementioned PPP perspectives enable researchers and policy makers to appreciate the different formal/contract structures, actors, objectives, significance, contexts and culture that shape the PPP understanding, and their unique, complementary and, at times, overlapping governance roles in public service delivery. Most importantly, the study introduces a new PPP perspective of procurement management to literature. The next subsection analyses the contribution of PPPs in the development of public infrastructure.

2.3.3 The Contribution of Public Private Partnerships in the Development of Public Infrastructure

Governments around the world make appealing policy promises when embracing PPP as one of the models for delivering public services (Eggers and Startup, 2006:1). In Uganda, for instance, the objectives for undertaking PPPs include cost effective delivery, good quality services, clear customer focus, enhanced incentives and service diversity, better asset utilisation, and delivery of more projects and wider economic benefits (Republic of Uganda, 2010:5). Using an economic perspective, the World Bank Group (2012:7) argues that, because governments largely depend on private sector financing and direct user fees to develop and pay for the operation of public infrastructure, PPPs can therefore free up cash and other resources to support other government priority areas. This minimises direct borrowing and accelerates infrastructure development than what the government alone would achieve by using public funds and long-term borrowing. However, Siemiatycki (2013:4) argues that the governments' motivations for PPPs have varied by jurisdiction and evolved over time. This is in agreement with Weihe's (2008: 439-440) notion that, in the early conception, the macroeconomic argument was that PPPs would enable the public sector to access finance for capital investment, but lately the rationale has changed to risk transfer and value for money. According to Ong'olo (2006), for the public sector to achieve maximum performance, the PPP contracts should provide necessary flexibility and incentives to the private party. This is in line with the Commonwealth Secretariat, which argues that having the

right commercial incentives in place enables proper maintenance of the assets being used over the contract period (Yong, 2010).

Furthermore, in a study titled "anatomy of public private partnerships", Sarmento and Renneboog (2016) elaborately assess the contribution of PPPs from the public sector perspective. In their assessment of PPP contribution, they highlight the advantages and disadvantages together with a reason(s) qualifying each of them; see table 2.1 below.

Table 2.1. Advantages and disadvantages of public private partnerships for the public sector

PPPs advantages	Reasons for advantages	PPPs disadvantages	Reasons disadvantages
Off-balance sheet debt	Increase fiscal space in the investment years	Affordability concerns debt "overhang"; Future payments may threaten public finance sustainability; Liabilities may not be known until payments arrive; Government guarantees represent future liabilities	Reduces fiscal space for future years; Low budget transparency
Reduce infrastructure gap	Economic and social externalities from new infrastructure; Impact on GDP and on unit costs	Temptation to build assets with no economic or social rationality	Public funds wasted in bad projects; Cost of opportunity test
Achieve Value for Money (VfM)	Better use of public resources	VfM is complex and difficult to measure; VfM is based mainly on risk transfer	It is not clear that PPPs are more efficient than alternative models
Risks transfer to private sector	Risks allocated to party best able to manage them. Private sector higher efficiency	Risk is complex process; Bias in PPPs' favour; Public sector lack of experience	
Public sector focus on strategy, rather than operational tasks	Enables public managers to address key issues and not disperse with non-significant problems	Lack of clear public policies and objectives; PPP planning is complex	Long term and complex contracts
A single contract with one entity	Increases transparency; Easier to manage and control	High percentage of renegotiations	Incomplete contracts lead to little flexibility and promote renegotiations; Asymmetric information reducing competition and efficiency

Source: Sarmento and Renneboog (2016:102)

Based on the table 2.1 above, the key benefits of PPPs to government include: no or less direct capital expenditure is made by government during the construction and maintenance of the facility; private sector bears substantial project risks and responsibilities compared to government; payment for the infrastructure is spread over a long period of time, say 20-30 years; ownership of the physical infrastructure remains with government during the contract period; and, at the end of the contract the

infrastructure is often returned to the public sector at no fees. On the other hand, PPPs can be unsustainable to government when: several PPP projects are undertaken simultaneously (i.e. causing liquidity and affordability constraints); government policies change over time (especially with change of governments); investment and financing decisions are mismatched, user fees are hiked because of poorly drafted or managed contracts; and partners prioritize opportunistic behaviour e.g. private providers bidding lower prices to beat competition but with an ill-motive of renegotiating later for a higher pay.

Notwithstanding the enormous benefits aforementioned, like any other public service delivery modality and referring to Sarmento and Renneboog's suggestions in table 2.1 above, PPPs are not immune to challenges/risks. As such, the public sector must effectively manage PPP processes, both from its own side as well managing the private partners to realize the full benefits of implementing PPPs. Based on this preamble, the remaining part of this subsection provides additional challenges/risks and some mitigation measures of PPPs from three empirical studies. In a study titled "Strategic infrastructure-steps to prepare and accelerate public private partnerships", Rothballer and Kim (2013:17) highlight and describe general challenges to PPP arrangements; as provided in table 2.2 below.

Table 2.2. General public private partnership challenges

Potential Challenges	Description
Restricted control and flexibility	Governments are sometimes unwilling to share control of infrastructure due to the inflexibility to influence future system design and operations, particularly with regard to national interests, social objectives and integration with other facilities.
Transaction and monitoring time and costs	The indirect and direct costs of management time and advice from experts in the preparation, procurement and monitoring of PPPs can be very high, yet are often unavoidable. As these expenses are largely fixed, PPPs are only cost-effective above a certain project size.
Regulatory failures	The design of regulatory regimes is sometimes sub-optimal, or the originally conceived regulation is gamed by special interest lobbying ("regulatory capture"). Private operators might have insufficient incentives to regard safety, equity, community and environmental considerations, raising the risk of market failure if no adequate regulations for internalizing these issues have been stipulated.
Incomplete contracts	Even the best PPP contract cannot foresee all circumstances that may arise over a concession duration of multiple decades. Thus, the need to amend the contract can entail lengthy and expensive renegotiations between the partners.
Public budget risks	If a PPP uses availability payments and is over-dimensioned, this may lead to excessively high future government payments and possibly costly renegotiations. In some cases, politicians have excessively used PPPs with availability payments, effectively moving public obligations into the future and off the government's balance sheet with a resulting large contingent liability to the public budget.

Source: Rothballer and Kim (2013:17)

In addition to challenges described in table 2.2 above, Rothballer and Kim (2013:18) further assert that PPP projects fail due to lack of an integrated strategic plan and long-term project pipeline, opaque and slow tendering, opportunistic regulation and termination, weak financial structure and low operational performance, stakeholder resistance, inadequate risk mitigation and misaligned incentives, lack of preparation funding and rigorous project preparation process, low local financial market and local industry development, insufficient revenue sources and lack of market soundness, biased value for money analysis, overbidding and renegotiation, and macroeconomic shocks.

Given that the Unit of inquiry of the overall study investigates PPPs for the road infrastructure development, the remaining two studies provide PPP challenges for transport and more specifically road projects. Soomro and Zhang (2013a) conducted a study on 35 PPP transport projects, the majority of which were roads, and established several failures for PPP projects, as provided in table 2.3 below.

Table 2.3. Public private partnership challenges based on project lifecycle approach

Stage one: Feasibility ❖ Inadequate technical feasibility assessment. ❖ Poor economic and financial feasibility assessment. ❖ Unrealistic demand predictions and projections during project feasibility assessment.	**Stage two: Procurement and tendering** ❖ Incorrect public sector benchmarking. ❖ Inaccurate cost estimation. ❖ Non-competitive tendering. ❖ Weak scrutiny/concessionaire selection procedures ❖ Selection of unsuitable concessionaire ❖ Financial problems with concessionaire at early stages of the project post tendering and negotiation stage ❖ Inappropriate risk allocation between partners ❖ Demand of higher subsidies/guarantees by concessionaire at early stages of the project ❖ Vague contract document descriptions ❖ Unfair privileges/rights to concessionaire ❖ Shifting pricing control to concessionaire
Stage three: Project construction ❖ Delayed acquisition of land ❖ Slow and hindered project progress ❖ Inadequate project monitoring ❖ Delayed approvals and actions by public officials ❖ Cost overruns ❖ Poor quality works by concessionaires ❖ Lack of coordination with parallel projects during project construction ❖ Poor corporate governance in project company	**Stage four: Project operation** ❖ Traffic demand lower than expectations ❖ Customer/market confidence damage ❖ Project's inability of market competition ❖ Ineffective commercial/business strategies ❖ Negative attitude of public sector official in solving project problems ❖ Conflicts between public and private partners ❖ Unfair toll pricing strategies ❖ Legal proceedings due to conflicts between partners

Source: Soomro and Zhang (2013a:119)

While individual responsibility is vital in managing some of the PPP transport project issues, according Soomro and Zhang (2013a:118-121) lack of shared responsibility leads to inappropriate risk allocation, delayed land acquisition, slow and hindered project progress, cost overruns, lower traffic demand, enforcement of unfair toll pricing, and expensive legal proceedings, to mention but a few.

Finally, in the last unique study titled "risk management in motorway PPP projects", Carbonara, Costantino, Gunnigan and Pellegrino (2015) delineate external and internal projects risks, as well as provide mitigation measures per risk, as demonstrated in table 2.4 below.

Table 2.4. Public private partnership risks and mitigation measure per risk for roads

Risk category	Risk mitigation strategy
1. Pre-investment risk	• Provision for refunding the bidding cost by government • Conditional bidding allows for setting certain logical conditions to be met before a bid is placed • Detailed market analysis before bidding so that the investment will be made only if the market conditions indicate a good scenario • Bid as a consortium involving two or more buyers
2. Site risks	
2.1 Land use and acquisition/ resettlement and rehabilitation risk	• Compensation clause in concession agreement • Provision for increase in construction/concession time • Contingency fund for increased land cost • Exit clause in concession agreement • Clause of effective start date and contingent effective start date in concession
2.2 Site condition	• Site inspections and testing
2.3 Site preparation	• Government can commission contamination reports, given that government should also have greatest knowledge of the past uses of its site
3. Financial closure risk (project finance)	• Provision for alternate promoter/lender • Provisions for grant/subsidy from government • Alternate technology for cost reduction in case of non-availability of full debt: choose a technology less expensive than the original one in order to decrease the amount of debt required
4. Design risk	• Defect liability clause in contract
5. Construction risks	
5.1 Cost overrun	• The sponsor or investors must agree to come up with the additional capital • Contingency fund is a percentage assigned to the budget for overruns or unforeseen costs • Fixed price (lump sum) contracts: the contractor/ construction company agrees to do the described and specified project for a fixed price • Cost-plus Fee Contract: the owner/concessionaire agrees to pay the cost of all labor and materials plus an amount for contractor/construction company overhead and profit (often a set monthly fee or a fee based on a percentage of the cost of the work) • Guaranteed Maximum Price agreement: an owner/ concessionaire and contractor/construction company can agree to cap the price once the project's design is substantially complete. Thus, a contractor who exceeds the capped amount is responsible for the difference, and if the total cost of the project is below the capped cost, the owner and contractor often agree to a "shared savings" benefit • The sponsors provide an escrow account containing sufficient funds to complete the project • Take out of lenders: the loan agreement can require the sponsor to purchase the asset and take out the lenders if the project is not completed and operating according to specification by a certain date

5.2 Delay in completion	• Completion guarantee extension to debt maturity guarantees that debt will be guaranteed until maturity in the event that completion is not achieved by a certain date • Completion/performance guarantees insure against financial loss from a delay in project completion attributable to specified causes, such as a failure of a party to perform on time • Penalties or liquidated damages state an amount or rate calculated in advance, usually payable by the contractor/construction company, for a delay to a project or performance failure. It is usually expressed in the contract as a fixed sum, daily or weekly rate • Supply guarantee: the contractor/construction company insures himself/herself that the supply (i.e. material or equipment) will be available where it is needed, when it is needed
5.3 Failure to meet performance criteria (quality, innovation, ...)	• Performance guarantees are forms of financial security provided by a party to secure the performance of the contractual obligations of the other. It usually provides for a monetary amount that may be called upon by the beneficiary of the guarantee in the event of a failure of the contractor/construction company to perform its obligations under the contract
6. Operating risks	
6.1 Operating cost overrun	• Maintenance bonds • Maintenance reserves • Fixed price and fixed duration operation contracts
6.2 Delays or interruption in operation	• Insurance for accidents and clean-up operations • Fixed price and fixed duration operation contracts • Retainage accounts (for contractor/construction company default)
6.3 Failure to meet service quality	• Performance guarantees from operator • Proven technology for operation and toll collection • Warranties for hidden defects • Performance bonus
7. Revenue risks	
7.1 Changes in taxes, tariffs	• Tariff guarantees • Traffic/revenue guarantee • Defer payments of the concession fees
7.2 Demand/usage risk	• Revenue sharing mechanism: the government has a right to claim the certain percentage of the revenue if the rate of return on the project's investment is above a specified value • Revenue distribution mechanism: the government provides a guarantee of extra revenues. In turn, the concessionaire will make additional investments in the project and the concession will end when the guaranteed value of revenue is collected • Least present value of revenue mechanism: the concession ends when a specified level of LPVR (least present value of the accumulated revenues) had been reached • Defer payments of the concession fees • Expand project capacity • Contract project capacity • Minimum revenue guarantee • Usage guarantee

8. Asset Service level risks	• Option to abandon for salvage value
9. Financial risks	
9.1 Interest rate increase	• Interest rate guarantee, futures, options and swaps
9.2 Inflation	• Adjust concession price; debt guarantee
	• Compensation payment
	• Inflation caps/floors
9.3 Exchange rate	• Exchange rate guarantee
9.4 Debt servicing risk	• Flexible price formula to meet traffic revenue deficiencies
	• Provision for revenue shortfall loan from government
	• Debt reserve accounts
10. Force majeure risks	• Government indemnities for force majeure; suspending clauses
11. Regulatory/political risks	• Compensation from government
	• Government assurances
	• Offshore escrow account
	• Extension of concession
	• Compensation clauses from government

Source: Carbonara *et al.* (2015:168-170)

With table 2.4 above, the risk category 1-8 represents internal project risks, and the 9-11 risk category contains external risks. While external risks cut across the entire stages of the project, internal risks are mainly specific to each project stage.

In summary, this subsection (2.3.3) has provided an elaborate critique of the contribution of PPPs to the public sector, with an emphasis on benefits, and challenges as well as challenges/risks mitigation measures. In essence, the section serves to argue that while PPPs have numerous benefits without managing associated challenges, failure is inevitable. The next section discusses the theories applicable to effective management of PPPs operations.

2.4 THEORETICAL PERSPECTIVES OF GOVERNANCE IN PUBLIC SERVICE PROVISION

Several theories such as the game, principal-agent, incentive, institutional, stakeholder, networking, property rights, market failure, and transaction cost economics have been used to explain PPPs. Such aforementioned theories and many others carry a more general view of PPPs; as such, they lack the rigour or the required emphasis of public sector perspective of service delivery. Therefore, this study introduces five theories: the traditional public administration (TPA), the new public management (NPM), the new public service (NPS), the public value (PV), and the new public governance (NPG) theories as the most suitable paradigms for public service management. Nevertheless, the other theories, such as those mentioned in the first sentence of this section, where found relevant, their philosophical foundations were used to provide balanced phenomenological arguments in the study.

Based on the above positions, the purpose of this section is to discuss each of the five selected theories of public governance aforementioned, and thereafter propose, with justification or otherwise, the most

appropriate/relevant theories that underpin the PPP phenomenon for effective public service delivery - as provided in the subsections below.

2.4.1 Traditional Public Administration Theory

TPA theory focuses on the effectiveness of the policy making process and the extent to which public policy implementation addresses aspirations of the existing public policies (Osborne, 2010:415). According to Xu, Sun and Si (2015:15), in countries with inefficient market mechanisms and an immature third sector, the government serves as the absolute leader in the arrangement of the political system and allocation of public goods. Ironically, the government is expected to meet all the social and economic needs of the citizenry without considering the "real" public needs. Such a public system of governance is too radical, in that if the centre has a problem, the whole system collapses (Xu *et al.*, 2015:16). Subsequently, as government failures surpass market failures, open and competitive private sector participation becomes the best option (Byamugisha & Basheka, 2016:9). From such deductions, it is eminent that TPA is not suitable for PPPs in both theoretical advancements and practice.

Demystifying the inapplicability of TPA theory to public private partnerships

With this theory, the public sector disassociates itself from partnership relationships with the service provider and the receiver. As such, participation of the private sector or citizens in the provision of public services is transactional in nature and is at arm's length level. The existence of cooperation between the government, citizens and the private firms is almost non-existent, in that, away from the time of actual transacting or service provision, there is no relationship to be maintained. Therefore, TPA aims at fostering top-down governance structures, where public service provision is a full responsibility of public managers who are only accountable to politicians through constitutional powers for oversight, appointment, budgeting and legislation. Under such governance systems, the public managers do not serve the interests of the broader society but aim at pleasing a small group of elected officials who, illogically, pay allegiance to their political parties' positions or advance personal political agendas at the expense of the citizens' wellbeing. Actually, as Willems and Van Dooren (2016:202) put it, TPA produces short-sighted and unstable public policies designed to satisfy the selfish concerns of powerful and well-organized interest groups (of course in crime), bureaucrats inclusive.

2.4.2 New Public Management Theory

In response to the inadequacies and bureaucratic nature of TPA emerged the NPM theory, which introduces the methods of business or enterprise management to government (Xu *et al.*, 2015:15). As Peters (2010:40) puts it, the delivery of public service through bureaucratic processes is not only "clumsy, ineffective but also unresponsive". However, developing countries have not yet substantially

replaced TPA with NPM practices because most government functions continue to be vertically executed (Mongkol, 2011:39; Xu *et al.*, 2015:12). NPM reforms broadly aim at improving public services through a dual "government - market" structure (Mongkol, 2011:35) where government contributes capital to outsource public goods and services from the private sector. Summarily, NPM practices pay more attention to the relationship between the government and the market (Bonina & Cordella, 2009:2; Bao, Wang, Larsen & Morgan, 2012:445; Xu *et al.*, 2015), thus, "privileging the private over the public sector, the individual over the community, the consumer over the citizen, competition over collaboration, passive commodity consumption over active social participation, and personal choice over community responsibility" (Benington, 2007:2-5).

Demystifying the relevance of NPM theory to public private partnerships

The public sector focuses on formulating policies and controlling the way public services are provided by the private for profit organizations through specific performance indicators, monitoring and market based mechanisms. Public private partnership arrangements are purely based on commercial lines with the objective of achieving value for money by integrating some or all of the public infrastructure project tasks into a single long-term contract endorsed through a competitive tendering process. This mainly applies to PPP Operate and Maintain (O&M) concessions. Because of the open and competitive procurement methods used, PPPs enable facility users (i.e. only direct users) to not only participate in the processes of public policy definition, but also to influence the type and quality of service delivered. The efficiency of NPM to PPPs is two-fold. First, because of the longevity of the PPP contracts, the private sector is able to make reasonable returns since the initial heavy investment expenses are compensated by the reduced future maintenance and operational costs. Second, the public sector is able to transfer most of the responsibilities and risks to more capable, experienced and skilled private firms whose payment is dependent on making the physical infrastructure available and operating the same facility to provide the desired service. However, where turnkey contracts or special purpose vehicle arrangements are not used, the NPM philosophy becomes more applicable to conventional procurement (public procurement) rather than PPPs.

2.4.3 New public service theory

NPS theory is a movement built on the norms and practices that emphasize democracy and citizenship (Denhardt & Denhardt, 2015:664), and is a governance system that places the citizens at the center of managing public affairs (Denhardt & Denhardt, 2000:550). Government is expected to "play an active role in creating arenas in which citizens, through discourse, can articulate shared values and develop a collective sense of the public interest" (Denhardt & Denhardt, 2007:66) rather than government "attempting to control or steer society in new directions" (Denhardt & Denhardt, 2015:669). As such, citizens expect public service to meet standards of;:convenience (accessible and available), security

(safe and confident), reliability (correct and on time), personal attention (working with citizens to meet their needs), problem-solving approach (working with citizens to solve society problems), fairness (services provided in a way that is equitable to all), fiscal responsibility (use of money responsibly), and citizen influence (citizens influencing the quality of service they receive from the government) (Denhardt & Denhardt, 2007:61).

Denhardt and Denhardt (2007:4) argue that the NPS movement, "is now being manifested in the way we interact with political leaders, in the way we engage with citizens, and in the way we bring about positive changes in our organizations and communities". However, "for public servants to act as if their version of public interest is somehow superior to the perspectives and values of citizens, elected officials, interest groups, and political parties is undemocratic and unethical" (Denhardt & Denhardt, 2007:80). Instead, public administrators need to "focus on creating opportunities for citizenship by forging trusting relationships with members of the public" (Denhardt & Denhardt, 2015:665), while avoiding "quick fixes to problems derived from individual choices" (Denhardt & Denhardt, 2015:668). In the process, citizens learn more about government and government learns more about citizens (Denhardt & Denhardt, 2007:155). This in turn, increases citizens' trust and willingness to pay for civic investments, and the government getting energised to ensure that contractors maintain efficient processes, high quality, competitive costs, and citizen satisfaction (Denhardt & Denhardt, 2015:669).

Demystifying the relevance of NPS theory to public private partnerships

New public service focuses public service provision on complying with public interests through collaborative relationships, shared responsibilities and common understanding of public issues, and active involvement of citizens in government activities (Robinson, 2015:11). New public service practices ensure that PPPs meet the collective public interests, since public servants are given the mandate to develop innovative ways of strengthening citizen engagement in finding solutions to societal problems. The public managers are expected to pursue the implementation of PPP policy through brokering, negotiation and resolving complex service delivery problems in partnership with the citizens. Furthermore, the accountability of public servants extends beyond elected officials to incorporate a wider set of accountability relationships with citizens and communities (Robinson, 2015:10). The key role of government is to provide an environment in which PPPs can address society's service delivery needs through dialogue, open, flexible, accountable, accessible, and transparent means and structures.

2.4.4 Public Value Theory

Public value is value that is "consumed" collectively by the citizenry rather than individually by clients (Alford & Hughes, 2008:2). Spano (2009:330) points out that "everything has a value when somebody is willing to face a sacrifice to get it, because he/she believes that the potential benefits outnumber the

sacrifices". At a society level, public values provide "normative consensus about (a) the rights, benefits and prerogatives to which citizens should (and should not) be entitled, (b) the obligations of citizens to society, state, and one another, and (c) the principles on which governments and policies should be based" (Bozeman, 2007:13). Therefore, public value is a rigorous way of resolving democratic deficits, judging the viability of projects, decision making, and of defining, measuring and improving performance (Rutgers, 2015:29; Sufna & Fernand, 2015:1-3). Resultantly, PV delivers both democratic values (equity, honesty and fairness), and the managerial values (efficiency and effectiveness) in the performance of tasks (Bonina & Cordella, 2009:2).

Based on the above deductions, PV practices maximise citizen welfare by remedying market failures of negative externalities, natural monopolies and imperfect information, and increases trust for and legitimacy of the government (Alford & Hughes, 2008:2-3; Talbot, 2008:18). Such translate into (a) generation of economic activities and employment, (b) improved social capital, social cohesion, social relationships, social meaning and cultural identity, individual and community well-being, (c) improved democratic dialogue, active participation and citizen engagement, and (d) improved sustainable development and reduced public "bads" such as pollution, waste and global warming (Benington, 2007:11-12). Notwithstanding the aforementioned benefits, PV is criticised for focusing on achieving and measuring medium to long-term targets, yet governments that are dictated by the electoral cycles tend to focus on the short term targets. However, this can be contained given that public servants have a responsibility to focus on long-term public value (Benington, 2007:17), but on condition that they (public servants) do not engage in partisan politics but rather confine themselves to "program politics" because the real political environment can limit their autonomy in service delivery (Alford & Hughes, 2008:5).

Demystifying the relevance of PV theory to public private partnerships

Like the New public service theory, public value theory promotes accountability of public organizations, not only to their political masters, but to the citizens as well. It moves beyond political democracy that limits itself to the ballot box, to a level where public managers have the capacity to satisfy citizens' preferences through administrative structures that are more sensitive to local conditions (Blaug, Horner & Lekhi, 2006:6). For PPPs to positively influence service delivery, public institutions need to listen to, shape and inform the preferences of the public via deliberative engagement, better information and educational initiatives, which are more transparent and visionary, rather than just give the public what it wants at a particular time (Blaug, Horner & Lekhi, 2006:59). This is possible, only if public managers have the capacity and use innovative means to influence institutions, politicians and citizens to positively respond to the refined public preferences. Based on Coats' (2006:40) suggestions, public managers can ensure PPPs deliver value to the public through increasing the quantity and quality

of public activities for the resources expended, reducing the costs (in terms of money or authority) used to achieve current levels of service, making public organisations better able to identify and respond to citizens' aspirations, enhancing fairness with which public sector organisations operate, and increasing the continuing capacity of the organisations to respond and innovate.

One of the important tools for advancing public value paradigm in a real PPP environment is the "Public Value Scorecard" developed by Meynhardt (2012:23-24). It is an effective management tool for assessing the viability of proposed PPP projects and evaluating the appropriateness of project implementation decisions using the chance and risk approach. Because the tool assesses and evaluates the various PPP operational structures and system environments while making a tradeoff among five dimensions of, namely, profitability, usefulness, decency, positive experience and political realism/acceptance, the tool ensures that PPPs' policies and management strategies are politically legitimate, operationally feasible and sustainable, ethically acquiescent, and valuably adequate to citizens and the private actors.

In summary, the PV approach: provides tools to demonstrate why public money should be or how it was spent on PPPs; improves the quality of decision making by contributing to evidence based solutions; challenges a purely technocratic or expert-led performance approach; makes full use of the knowledge and experience of service users and citizens; educates the public about the dilemmas facing politicians and public managers and the limits of what can possibly be offered; and ensures effective management of political risks (Coyle & Woolard, 2010:11).

2.4.5 New Public Governance Theory

NPG is a mode of practice that is more adapted to the modern government of public affairs (Xu *et al.*, 2015:11). It agitates for sustainability of public policy, public services, public service organisations, societal and environmental concerns (Osborne, 2010:413) by creating transparent activities, processes and open structures that are more socially responsive (Patapas, Raipa & Smalskys, 2014:28). It views management of public affairs from several strands of socio-political governance, public policy governance, administrative governance, contract governance, corporate governance, metagovernance, decentred governance and network governance (Osborne, 2010:6-7; Rhodes, 1996:653; Rhodes, 2016:6-7). The theory is centred on the effective management of institutional and external environment pressures that can enable and constrain public policy implementation and delivery of public services within a plural and pluralist system (Osborne, 2010:415). A plural system is where multiple interdependent actors contribute to the delivery of public services, and a pluralist system is where multiple processes inform the policy-making system. Within governance systems "problem solving is not the preserve of a central authority able to impose solutions on subordinate agencies and individuals, but the result of the interaction of a plurality of actors, who often have different interests, values,

cognitive orientations, and power resources" (Koenig-Archibugi, 2003:319). As Kooiman (1993:4) states, "no single actor, public or private, has all knowledge and information required to solve complex, dynamic and diversified problems; no single actor has sufficient overview to make the application of needed instruments effective; no single actor has sufficient action potential to dominate unilaterally in a particular governing model".

New public governance practices appreciate that there is a shift from direct forms of governance to a process of governance exercised through plurality of actors, sites, spatial scales, and processes, with an increasing reliance by government on informal forms of power and influence rather than on formal authority alone (Kennett, 2010:25). This enables the development of more "joined up" strategies and "people centred" approaches in which different levels of government work together in closer partnership with other public, private, voluntary and informal community organisations to promote more devolved "self-sustaining systems of improvement" for the community well-being and satisfaction (Benington, 2007:3).

Demystifying the relevance of NPG theory to public private partnerships

NPG practices focus on how rules and norms are increasingly co-created and co-regulated by state, citizens and non-state actors through autonomy and authority sharing to deliver public services. NPG encourages the provision of public service through PPPs based on joint collaboration and governance led networks to enable actual interaction, horizontal power relations, close organisational relations, trust, reputation, reciprocity, mutual interdependence and joint decision-making (Stelling, 2014:11; Mauri & Muccio, 2012:51). Accordingly "PPPs have become an ongoing reconfiguration of authority in the world of politics" (Stelling, 2014:12-13). This assertion is justified by the current governance and management systems that promote coexistence of institutional, contractual and informal network structures in which citizens, government, private sector and civil society organizations are given an opportunity to collectively direct and participate in the provision of public services. This prompts PPP operations to be coordinated within well-networked organizational structures, managerial and institutional strategies that are directed towards the achievement of universally determined service delivery outcomes. In fact, the co-production and co-regulation initiatives advanced by the new public governance approach enable public service stakeholders to exchange more information and use each other's knowledge to generate more innovative and better PPP products and policy outputs for complex societal problems (Klijn, 2010a:73).

In conclusion, Villanueva (2015:127-130) argues that new public governance is now being institutionalised by passing of PPP Acts; and that such legislations recognise the insufficiency and lack of self-sufficiency of government, and acknowledges the relevance of adding on private and social

resources to existing public ones in order to strengthen the society and government's capacities to tackle critical problems and promote relevant projects.

In summary of section 2.4 and based on the discussion of the five theories above, two positions were taken:

1. **TPA is not compatible with PPP principles and practices**. Reasons being that: it does not encourage the involvement of private sector through competitive and partnership means, does not allow the public servants and private sector players to innovate, minimizes the influence of the third sector, payments for services are either in advance or shortly after delivery but not on long term accrual basis, and leaves government to be the only developer and implementer of public policies in the provision of public services.
2. **NPM, NPS, PV and NPG are relevant PPP theories and have been used to inform the overall study.** The study recommends more than one theory (only four) because, in our view, though a single overarching theory for PPPs has emerged (i.e. the NPG), public sector practices have not yet fully appreciated it. Actually, public sector operations currently meander in all the five theories (i.e. including TPA) trying to find a better fix of PPP excellence.

2.5 THE ANALYSIS OF THE DISCUSSIONS FROM THE MAIN THEMES

This section presents the key issues that come out of the discussions made in the previous three main themes above, with the aim of addressing the first objective of this study. The analysis for each of the themes follows below.

2.5.1 Public infrastructure development for service delivery

Public infrastructure, in whatever form, has an impact on social and economic development of communities and a country as a whole. The impact of public infrastructure can be either positive or negative, depending on how well or poorly it is maintained and developed. Although Africa's population size is growing at an increasingly higher rate than any other part of the world (OECD, 2015:4), its infrastructure remains the most stagnant, the least developed and inadequate to meet the citizens' increasing needs. Furthermore, the annual infrastructure gap for Sub-Saharan Africa alone is as high as US$48 billion, a signal that there is a lot of inefficiencies in the processes of planning and decision-making, and weaknesses in the actual infrastructure investment strategy implementation. For instance, most African economies have for long neglected the maintenance of infrastructure, since they have specialised in corrective maintenance and seem not to value the power in preventive maintenance as well. Such circumstances and behaviour, not only retard productivity but also unnecessarily hike the costs of living, consequently lowering the overall standards of living for the continent.

From the discussions in subsection 2.2.3, it was established that transport infrastructure in Africa, particularly for the road sub sector is in a dilapidated state, yet it has a great potential to accelerate investment in other sectors of the economy. This implies that roads can play a very important role in uplifting people's lives, more than any other infrastructure facilities on the continent. Therefore, prioritizing investment and development of the road transport infrastructure, while decisively managing their implementation, will definitely improve not only the affordability, but also accessibility to both social and economic services.

Unless African governments change from their so "seemingly fixed and slow" to "real steady and accelerated progress" practices in the planning, financing, building, maintenance and operating of road infrastructure facilities, the current transport challenges of severe traffic congestion and accidents, high user transport charges and vehicle operating costs, long travel times, uneven and inaccessible road network, low maximum speed, unsafe and inefficient movements, and increased damages, and spoilage and mishandling of in transit goods, will undoubtedly remain far from extinction. With the above analysis, it can be confidently suggested that the African road infrastructure development needs can best be met through PPP arrangements, and as a matter of fact, Uganda need not be the exception to such road infrastructure interventions.

2.5.2 Public private partnerships for infrastructure development

From the PPP definitions and perspectives explored in the subsections 2.3.1 and 2.3.2, it is clear that PPPs cannot constitute a single technique for infrastructure delivery, but a phenomenon that covers many meanings and applications. The insinuations from literature discourse that the PPP confusion can be solved by having a single and over-arching PPP definition or strand, is not only illogical but also irrelevant, given the existence of different PPP research traditions with different knowledge clusters and usage (Weihe, 2008:436). Relatedly, Boardman *et al.* (2015:442) argued that "in scientific sense, there is no such a thing as a PPP model". They justified their reasoning by the notions that: there are many PPP delivery options or contract arrangements which differ in terms of whether the public or private sectors complete a particular task or activity from initial planning through to the final maintenance and operations stages; the extent of financial contribution from each sector; the specific project to be delivered; which party bears which risks; the strength of incentives for performance; and how transparency, accountability and governance issues are handled.

In fact, the misunderstanding about what PPPs are and what they are not, is because of the failure to acknowledge the existence and making use of the uniqueness in the different PPP perspectives. The uniqueness found in the different PPP perspectives can be manifested in the statements below:

- The third sector is a more common participant in the development PPPs than in other PPP types (Weihe, 2008:435).
- Principal-principal relationship applies to urban regeneration approach while infrastructure PPP strand is based on Principal-Agent relationship (Weihe, 2008:435).
- Defining PPPs as long-term contract does not apply to all PPPs (Weihe, 2008:435). For example, development PPPs can either have short or long-term contracts depending on the magnitude of the intervention being undertaken and the availability of the resources required.
- Co-production and collaboration in infrastructure PPPs are limited, since the private actors sign contracts which obligate them to deliver specific services, within specific times at fixed prices (Weihe, 2008:435; Hodge and Greve, 2005b:6).
- Contrary to partnership principles, formal contractual relationships expressed in many PPP definitions lower the degree of mutuality (Brinkerhoff & Brinkerhoff, 2011:6).

Boardman *et al.* (2015:446) attribute variations in the understanding of PPPs to: the distinctiveness in legal and policy contexts in different jurisdictions with different financing and risk sharing arrangements; significant cross-national differences in institutional arrangements and the nature and level of public accountability; the existence of multiple stakeholders with multiple objectives that shift over time; and the difficulty in obtaining accurate and relevant data on cross-national policy lessons, institutional arrangements, and on performance standards and outcomes, that gives a chance to lazy PPP researchers to selectively bend PPP evaluations to their own interests of either successes or failures.

Drawing from Khanom (2009:12-13), it can be concluded that inappropriate conceptualisation when defining and designing PPPs can be mitigated through:

- recognising that there are several categories of PPP (e.g. BOT, DBFO, BOO, BOOT) with different governance, management and policy design requirements;
- being precise on the common features such as the nature of cooperation, inter-organisational arrangements, financial arrangements and commitment;
- being specific on the governance aspects such as decision-making process, roles and responsibility of different organisations/actors in both policy and contract frameworks;
- being clear on the roles of the different policy communities and policy networks (including third sector);
- being specific on the purpose (e.g. community development, poverty alleviation or infrastructure development);
- setting a definite direction for different actors to achieve a PPP outcome; and
- taking into account the political culture including the role of political parties, political government and bureaucrats in PPPs.

From subsection 2.3.3 which discusses the contribution of PPPs, it is clear that PPPs cannot fully replace traditional financing and development of infrastructure, but offer several benefits to governments in trying to address infrastructure shortages or improve the efficiency of their organizations (Eggers and Startup, 2006). Using Davies and Eustice's (2005) argument, the primary advantage PPPs may offer over conventional procurement is the efficiency gains that privately led construction and maintenance may bring. Klein (2012:22) claims that using private sector financing, for instance, to develop public infrastructure is only superior "when governments are credit constrained and thus cannot borrow". However, since governments that are not fiscally constrained such as Singapore also implement PPPs (Yong, 2010), it would be wrong for policy makers to think that PPPs are exclusively for raising finances while ignoring more noticeable benefits of value for money, good governance and improved service quality.

In our view, no matter the economic and financial standing of any country, the world over the public sector's engagement of the private sector through PPP arrangements is mainly to benefit from private financing rather than the well talked about private partner technological innovation, expertise and skills. This view is shared with Greve and Hodge (2013:213) who state that "finance is central to infrastructure PPPs". On the other hand, the private sector firms' involvement in PPPs is oriented towards seeking long-term investment opportunities that can provide them stable and predictable returns while assisting the public sector achieve its social and economic agenda, as long as the long-term sustainability of PPP projects is anticipated or assured. Furthermore, though uncommon to developed countries, emerging economies are known for making ambitious PPP policy promises in order to satisfy present and near future infrastructure needs, forgetting that the achievement of such needs follows more or less the learning curve of ideologies. Relatedly, public agencies in developing economies always overemphasize the undertaking of PPP projects to achieve the balance sheet status, while unfortunately increasing the unbearable current and future infrastructure investment costs.

With specific reference to PPP challenges/risks, key lessons identified are that:

- the project life cycle approach has the capacity to identify most if not all the PPP challenges of a project so as to allocate appropriate strategies for their management, unless the assessors have or do experience some constraints;
- because of the differing interests of the various PPP stakeholders, it becomes difficult to develop consensus on a comprehensive list of PPP challenges for any project, hence complicating the effective management of the "real" PPP performance obstacles; and
- where PPPs are based on revenue streams from users and the private partners have been given exclusive powers to set toll fees, they have always charged prices much higher than what the citizens willingly accept or can afford to pay.

All in all, PPPs should not be seen as a panacea for enhancing public value or for solving all public sector problems, but rather, "another form of public service provision, that attempts to achieve social and economic outcomes that may not be obtained by government or private sector forces acting separately" (Grimsey & Lewis, 2007: 58). As Reim (2009:1) posits, "experience shows, not every PPP delivers a better service quality or saves costs. In fact, some PPP projects even turn out to be the worst of all possible alternatives." With regard to costs, for example, the private sector's borrowing costs are higher than for public sector agencies (Roberts & Siemiatycki, 2015:780). Attestation to this is the evidence from the UK National Audit Office 2015 review, which indicates interest rates for all private financing deals ranging from 7-8% compared to all government borrowing that is between 3-4% (Romero, 2015:6). A situation that most likely makes PPPs more expensive than other delivery approaches if appropriate precautions are not taken.

2.5.3 Theoretical perspectives in the governance of public service provision

The analysis of the discussions in section 2.4 is drawn from the PPP framework developed by Stelling (2014), which indicates that PPPs lie between either contracting-out and private provision, or contracting-out and public provision. Note that, compared to contracting-out, PPPs extend more public service delivery responsibilities to the private sector.

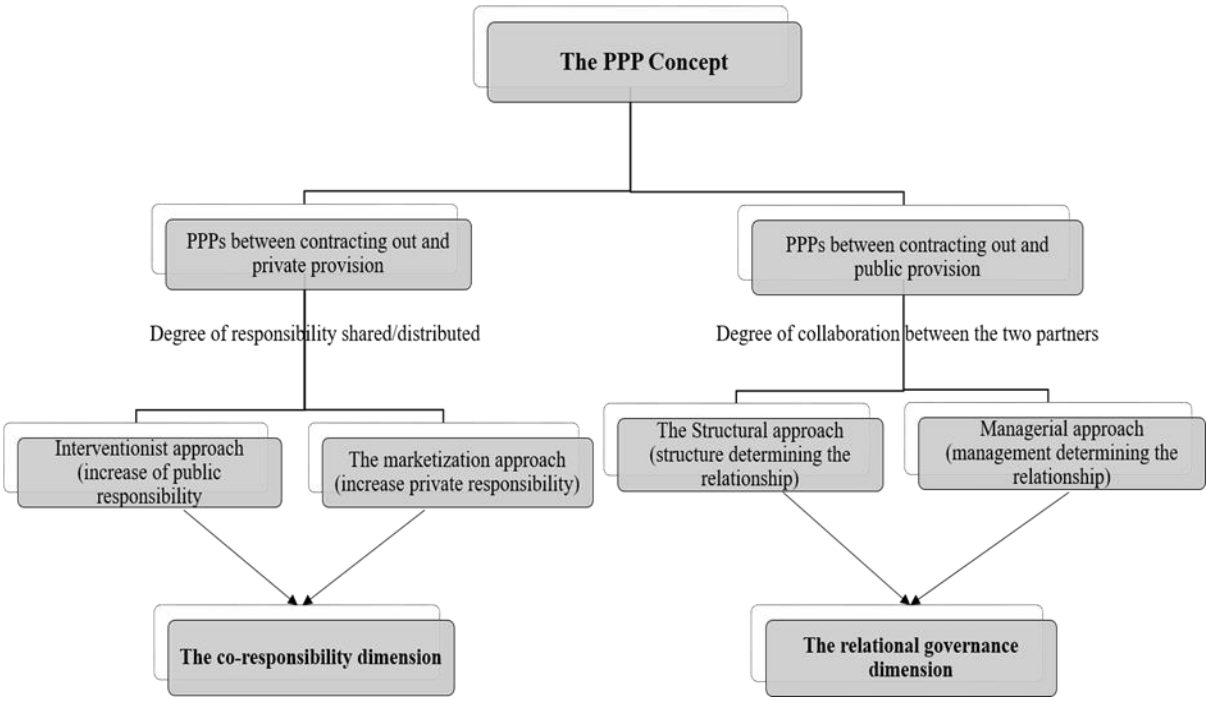


Figure 2.1. Public Private Partnership approaches

Source: Modified from Stelling (2014:14)

Based on the marketization approach, the new public management theory is a response to the failure of the state in the provision of public services by involving the private sector with a wide range of responsibilities to create more efficient delivery solutions. In fact, PPPs that employ this approach promote "the less government but more market philosophy". As a result, the responsibilities and powers of the public sector are minimised to a level of just making policies and overseeing the achievement of set performance targets by the private sector. Unfortunately, with such PPP delivery approach, there is a tendency by the private sector to be preoccupied with maximising profits rather than delivering effective public services.

Based on the interventionist approach, the NPS and PV theories are a response to the deficiencies of the private sector in the provision of public services. The public servants and citizens are given more powers to influence the provision of public services in order to protect the overall society interests against cruel behaviour of some private sector players. Though the private sector still has greater responsibilities in the execution of actual PPP project tasks, its powers to direct the provision of public services are minimised, and its performance is heavily regulated and closely monitored by public sector managers in collaboration with the citizens. The New public service and Public value principles can do well in countries with some credible level of democracy, or on government projects where intergovernmental organisations that promote good governance are involved. Compared to the New public service theory, what makes the public value theory stand out is the fact that scholars have provided frameworks that can be used to legitimize, create and measure the provision of public valued services.

Based on the structural and managerial approaches, the New public governance theory is a response to both the market and government failures in the provision of public services. The New public governance theory emphasizes joint value creation through inclusive public service delivery collaborative relationships. The powers of the public managers, private sector players and the elected political representatives are minimised since public service delivery decisions are made and implemented based on joint and semi-joint institutional, formal and informal organisational, contractual and non-contractual structures through mutual managerial strategies and interactions. As a consequence, neither the public nor the private sector players can directly force other project actors to behave in ways that go against their will.

From the deductions above, it can be concluded that the main contribution of NPS and PV over NPM is the view that public sector powers in the provision of public services need to be strengthened, rather than minimized. On the other hand, unlike NPG that is all embracing, NPM, NPS and PV focus on PPP projects delivering efficient and effective public services, but are less interested in inter-organisational collaborations. In fact, the NPM, NPS and PV subscribe to the partner co-responsibility dimensions

where the focus is on sharing or distribution of responsibilities, while NPG subscribes to the Partnership relational governance dimensions where the interest is on joint value creation and mutual decision-making. However, according to Stelling (2014:13), though "co-responsibility and relational governance are separate dimensions, PPPs require both a partnership as well as autonomous and responsible partners since there is no partnership without partners and no partners without a partnership".

2.6 CHAPTER SUMMARY

This chapter provided meaning to public infrastructure and PPPs concepts by interrogating definitions and various classifications that are manifested in research and policy documents. An African view was used to assess the impact of infrastructure on service provision from a broader public infrastructure setting and ended with the road sub-division. A discussion on the contribution of PPPs in the development of public infrastructure was undertaken, and the challenges that PPPs face in the development of public infrastructure were presented. Governance theories applicable to the provision of public services were critiqued and their relevance to PPP structures were explored. Finally, the analyses of the key issues that come out of the main themes of the chapter are presented. The next chapter will describe the key elements of a PPP governance structure required to facilitate the effective development of public infrastructure.

3 CHAPTER 3: THE KEY ELEMENTS OF AN EFFECTIVE PUBLIC PRIVATE PARTNERSHIP GOVERNANCE STRUCTURE

3.1 INTRODUCTION

The previous chapter has shown that PPPs are vital in the development of public infrastructure, however, it does not negate the fact that PPP projects operate in an environment with enormous challenges/risks that are deterrent to their sustainability. Accruing from the fact that, "effective and efficient governance maintains a decisive role in PPP performance" (Liu, Love, Smith, Regan & Davis, 2015:5), this chapter tackles objective two which seeks to provide a clear understanding of PPP governance, and an analysis of the key elements of PPP good governance structure that should be considered by the public sector in order to contain the occurrence or negative impact of potential challenges/risks associated with PPP projects. In fact, the challenges/risks in the PPP operational environment have derailed PPP project performance globally because of lack of, or inappropriate, safeguards. According to the World Bank (2009:40-41), for example, PPP projects in Africa underperform due to "common governance mistakes", as highlighted in Table 3.1 below.

Table 3.1. Common governance problems and preparation mistakes of PPP projects

Common Problems in Project Governance	Common Mistakes in Project Preparation
❖ A part-time project manager (having another full-time job inside the public authority) ❖ Frequent changes in the project team ❖ Lack of resources or excessive reliance on advisers for decision making ❖ Insufficient delegation of powers to the project management group so that even the smallest decision needs to be referred upward ❖ Interference from other bodies outside the governance structure ❖ Poor management of the day-to-day resources, including the external advisers ❖ A project board that is too large and unable to meet as required to make key decisions	❖ Lack of clarity by the public authority regarding what it wants from the project ❖ Lack of project ownership and leadership ❖ Poorly resourced project teams ❖ Selection of advisers on the basis of cost rather than quality and experience ❖ Lack of effective engagement with stakeholders ❖ Lack of understanding of and contact with the private sector at senior levels and poorly conducted market sounding ❖ Expectations that the private sector will deal with issues, such as the acquisition of land, that are better handled by the public sector ❖ Lack of clarity about the public authority's legal powers to enter into the public-private partnership contract ❖ Conflict between the procurement process and procurement regulations ❖ Overly ambitious project preparation timetables ❖ Release of incomplete project information

Developed from World Bank (2009:40-41)

Having justified the relevance of undertaking research objective two, as per the descriptions above, the next section 3.2 discusses the understanding of PPP governance.

3.2 THE UNDERSTANDING OF PUBLIC PRIVATE PARTNERSHIP GOVERNANCE

Governance refers to a framework that support a wide variety of mechanisms, traditions, processes, institutions and relationships within a PPP operational setting through which individual citizens, groups and organisations express their interests, exercise their rights and responsibilities, and mediate their differences to create opportunities and solve societal problems (Nelson & Zadek, 2000, as cited in McQuaid, 2010:142; Villanueva, 2015:128; Mauri & Muccio, 2012:50; Liu *et al.*, 2015). Overall, governance is about processes of making and implementing decisions, and/or choosing not to implement certain decisions using formal and less formal rules or guidelines to manage public or private sector organisation resources and affairs. This study approaches governance from the public sector perspective with an interest in effective management of PPPs.

In today's transformational society, the public sector no longer functions as a self-sustaining and independent actor in the formulation of policies and the provision of public services if society expectations have to be satisfied. The predominant plural and pluralistic nature of PPP arrangements dictate that multiple actors have to team up through the execution of synchronised multiple processes and activities for the public sector to meaningfully deliver public services. Drawing from Klijn's (2010b:304) point of view, for PPP projects to translate into effective vehicles for infrastructure development, the role of the public sector should be to direct, but not to monopolize, the setting of goals and the implementation of public programmes or project processes.

The assumption by traditional administration theorists that governance is "exclusively about government" is misleading, because Graham, Amos and Plumptre (2003:1) make it categorically clear that the governance phenomenon concerns "how governments and other social organisations interact together, how they relate with citizens, and how decisions are made, implemented, and accountability provided in a complex world" (see figure 3.1 below).

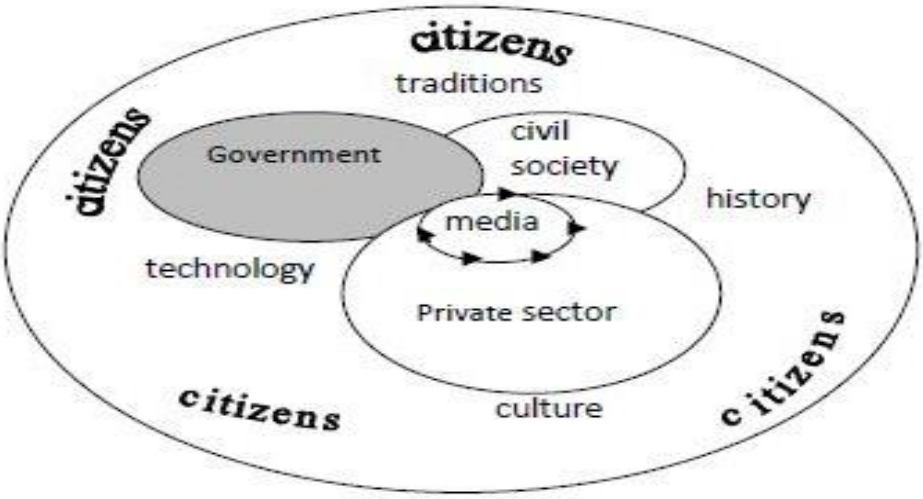


Figure 3.1. How Different Sectors Interact with Citizens

Source: Graham *et al.* (2003:1)

The illustration in figure 3.1 above depicts new institutional partnership arrangements, where politicians and public servants are obliged to share authority with other sectors of society (civil society, private for profit and the media organisations) and collaboratively work with each other and the citizens to address social and economic needs of the citizenry. Given that the power of other sectors of society (other than government) has nowadays increased, and to ensure that the authority given to them is not misused, their participation in the delivery of public services needs to be properly regulated. Hence, who should be involved and in what capacity, how they should be involved and at what level in the process, and their contribution in decision making and implementation processes should be known, monitored and evaluated over time.

Unlike the traditional public administration theory, which views governance as a coercive game of government, the above sentiments imply that, in PPP structures, no stakeholder is quite in charge of everything, as authority is spread and responsibilities are dispersed among a number of actors within the overall governance network (Greve & Hodge, 2010:153). To the contrary, Xu *et al.* (2015:13) argue that, no matter the extent to which government operates in a flexible manner to steer collective action, governance failure may still occur given that PPP governance is premised on the usage of both formal and informal rules to co-ordinate interests of different subjects that always conflict with each other. Subsequently, such form of governance creates uncertainties and complexities as to how PPP processes and actors' behaviour have to be managed in order to deliver public services to the satisfaction of almost every citizen.

Based on the above arguments, PPP projects by their nature operate in a very fragile and unpredictable environment, which requires a high degree of alertness and continuous monitoring of the changing trends in the internal and external environment, and time after time developing appropriate strategies to contain the shocks therefrom. As Verhoest, Voets and Van Gestel (2013:189-190) points out, better PPP performance requires collaboration and honesty among multiple actors, controlling the technical and political processes, and the commitment of government when discharging public functions. Unless such readiness and response is actioned, complexities and uncertainties can spontaneously arise, resulting in inefficiencies and ineffectiveness in governing PPP operations.

The next section (3.3) analyses key elements of PPP good governance structure focussing on principles of PPP good governance, PPP stakeholder management, PPP critical success factors, PPP development trajectory, and PPP risk management.

3.3 AN ANALYSIS OF KEY ELEMENTS OF PUBLIC PRIVATE PARTNERSHIP GOOD GOVERNANCE STRUCTURE

According to the United Nations Development Programme **(**UNDP) (as cited in Rondinelli, 2007:7) good governance relates to "widespread participation by all citizen, decision making by rule of law, transparency in the actions of governance institutions, responsiveness to the needs and desires of citizens, equity in the treatment of citizens, effectiveness and efficiency in the use of public resources, public accountability, and the exercising of strategic vision in planning for development". Essentially, effective public service delivery is dependent on the public, private and third sectors having transparent and accountable institutions with competent and skilled employees that are willing to do the right things in the right way.

Building from the UNDP understanding of good governance, in this thesis good governance is being referred to as goals that are set out to be achieved and/or effective ways of managing processes, structures, strategies, principles, methods, roles and responsibilities, individual and organisational relationships in the political, legal, technological, ecological, social and economic environments to improve service delivery. Based on the fact that government must steer the governance of society affairs, Woods (2000: 824) emphasizes that effective public service delivery is realized when the existing public sector rules and institutions have allowed "markets to flourish and citizens to lead healthier and happier lives". Therefore, good governance mechanisms advocate for public management reforms that improve the integrity of public operations through better and citizen appreciated service delivery performance.

Given the above preamble, the remaining part of this chapter makes an analysis of each of the key elements of an effective PPP good governance structure, as mentioned at the end of the discussions in section 3.2 above. In particular, the next subsection analyses the principles of PPP good governance.

3.3.1 Principles of Public Private Partnership Good Governance

Principles of good governance are standards of behavior, which when complied with enable organizations to deliver public services to the expectations of the citizens or for the common good of society (Gisselquist, 2012:7). Therefore, "good governance responds to collective problems of citizens and fulfils their needs in an appropriate and accepted way" (Yousaf, Ihsan & Ellahi, 2016:201). In this sub section, we develop a list of PPP principles and discuss how each of them can contribute towards effective public service delivery.

3.3.1.1 Value for Money

Any product acquired or service provided without direct or indirect substantial value addition to processes and systems, or without ameliorating the lives of the intended beneficiaries, is a complete waste of resources, efforts and time. The United Kingdom (UK) Treasury (2006:7) refers to value for money as "the optimum combination of whole-of-life costs and quality (or fitness for purpose) of the good or service to meet the user's requirement" (See Burger & Hawkesworth, 2011:92; and Mwangi, 2016:171, for similar definitions).

Within the public sector circles, the ideal objective is to create the best value out of all money collected and spent (Grimsey & Lewis, 2005: 346). For the public sector to receive the best value it is required to choose a suitable procurement model resulting from a value for money test that takes into account both financial and non-financial benefits and costs over the whole life cycle of the project (Rothballer & Kim, 2013:13). The Public Sector Comparator (PSC) is the value for money analysis approach commonly used by public agencies to determine whether to use the PPP or public procurement route. However, PSC as a tool of value for money analysis has had some criticisms (OECD, 2008:110; Grimsey & Lewis, 2005:346&354; Burger & Hawkesworth, 2011:109). Notable among the criticisms of PSC is, "optimism bias, that is, the excessive use of low discount rate" (Sarmento & Renneboog, 2016:101). Therefore, to Sarmento and Renneboog (2016:101) the use of unreliable tools to measure value for money is one of the main PPP governance challenges.

According to Sundaram, Chowdhury, Sharma and Platz (2016:16) the potential of PPPs delivering improved and efficient public services that have a bearing on social and economic transformation, over and above what public procurement would do, is dependent on a country's institutional capacity to create, manage, monitor and evaluate PPP performance operations. Globally though, PPPs have

generally had a poor governance record ranging from, but not limited to: the off-the-government budget target, overestimation of benefits and demand, underestimation of costs, weak incentives to support PPP activities, and the tendency of only investing in profitable projects (such as building toll roads on busy routes while neglecting extending toll free roads to rural or semi-urban areas) (Sundaram *et al.*, 2016:16-18). Yet, the real reason for delivering public infrastructure and services through PPP frameworks should be for the citizens to receive improved quality and affordable services. The framework below illustrates how the public sector can achieve value for money through accountable and well-governed PPP institutional structures.

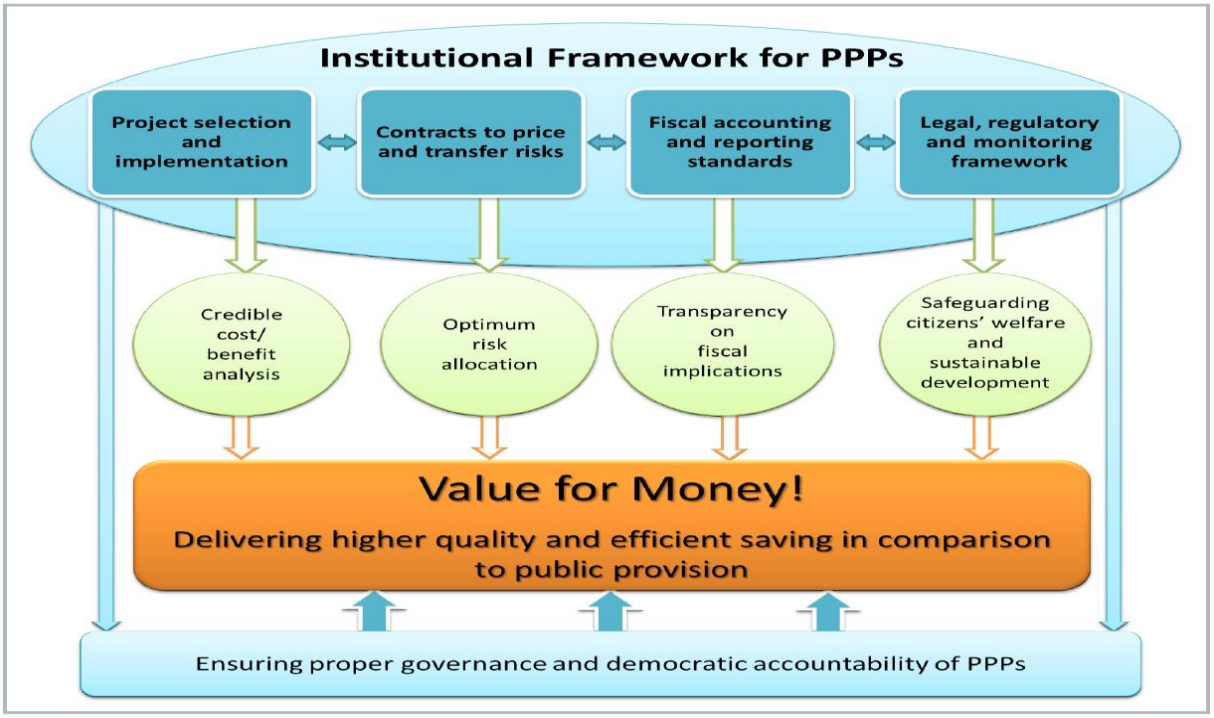


Figure 3.2. Key components of Public Private Partnership Value for money

Source: Sundaram *et al.* (2016:17)

With reference to the framework in figure 3.2, public sector organisations can achieve value for money if: PPP projects have been selected and implemented correctly; contracts are sound enough to enable reasonable pricing and realistic risk allocation; comprehensive and transparent fiscal and reporting systems are in place; and legal, regulatory and monitoring mechanisms that support citizens' welfare and sustainable development have been established and complied with. These in turn lead to reduced public opposition and unrest, minimised optimistic behaviour and project risks, improved competitive bidding, responsible accounting, fair selection and implementation of projects, and the overall provision of adequate and quality services (Sundaram *et al.* 2016:18; Grimsey & Lewis, 2005:347).

Given the reviews in this subsection, we conclude that sound value for money can only be achieved through optimization or trading off multiple objectives that drive value for money. Examples of such objectives include: risk transfer, whole of life costing, output specifications, competition, performance measurement, bankability, affordability and private sector management skills (Rothballer & Kim, 2013:13; Public Private Infrastructure Advisory Facility-PPIAF, 2015).

3.3.1.2 Dispute Resolution

Due to the enormous complexities and uncertainties of PPP contracts, such as having a multiplicity of activities and processes being handled by a multiplicity of participants, it becomes obvious to argue that disputes are part and parcel of PPP infrastructure project executions. Although disputes are commonly associated with negativity, in some instances they have proved to promote open and meaningful discussions in identifying and addressing needs, concerns, interests and values of the various PPP participants for realising service delivery impacts (United Nations Economic Commission for Europe-UNECE, 2004:5-6). In PPP dispute resolution language, such behaviour is an interpretation of using constructive rather than destructive conflict management styles for positive service delivery outcomes. Actually, using integrative approaches to resolve conflicts offers better results than relying on distributive means (Gad, 2012:11). Ironically, any positive outcome attained from distributive approaches benefits a few parties, and in the event that it becomes clear to the majority that they are disadvantaged in the partnership, more problems will arise than were initially thought to have been solved.

As UNECE (2004:6) suggests, it is good practice to include conflict resolution mechanisms in policy documents and contracts before conflicts can arise in order to ensure continued service provision on PPP projects amidst any future stakeholder misunderstandings. Table 3.2 below provides various dispute resolution mechanisms that can be used to resolve misunderstandings among parties, and conditions under which each of them can be applied in PPP arrangements.

Table 3.2. A Comparison of Different Dispute Resolution Mechanisms

DRMs / Pt. of comparison	Litigation	Arbitration	Mediation	Adjudication	DAB	Expert Determination
Parties involved in the decision	Judges and courts	Arbitrators	Mediators and Parties	Adjudicator	Panel of experts	An expert
Control level of the parties	None	Minor	Full	Average	Average	Minor
Decision enforceability	Final and binding	Final and binding	Non-binding	Binding, if stated in contract	Non-binding	Final and binding
Privacy	Public	Confidential	Confidential	Confidential	Confidential	Confidential
Relative duration	Very long	Long	Short	Short-set	Short	Short
Relative cost	Very expensive	Expensive	Less expensive	Average	Average	Not expensive
Key points	Technical knowledge compromised	Technical knowledge not compromised	Solution may not follow contract	Decision can be appealed	DAB knowledgeable of project	Preferred in complex technical issues

Source: Gad (2012:14).

KEY: DRMS = Dispute resolution mechanisms. DAB = Dispute Adjudication Board. Pt = Part

The first column from the left side of table 3.2 above provides generic determinants of dispute resolution, and the first row at the top of the table, provide a range of dispute resolution methods. Moving down in the columns of dispute resolution methods are features for each method as a benchmark of each generic determinant (factors that cut across all dispute resolution methods). The last row of the table provides the crucial issues about the application of each method in resolution of conflicts in PPP projects.

From table 3.2 above, we can conclude that effective utilization of dispute resolution mechanisms facilitate PPP project cohesion, but deviating from their fundamental principles or failure to appropriately manage disputes may result in delays, lowered team spirit, increased costs and damaged business relationships, which not only hamper project progress but may also subsequently translate into premature project termination. Recent trends indicate that PPP contracts are adapting multi-tier systems of conflict resolution, where the aim is to start with the less expensive and less formal dispute resolution methods, and progressively move to the more expensive and more formal ones until the disputes have been resolved (Gad, 2012:18). For instance, unless alternative dispute resolution mechanisms have been applied without some tangible success, most PPP participants would not be tantalized to litigate their differences because the court systems are procedurally too slow, expensive, and with such systems "a

poor settlement beats a good lawsuit" (Gad, 2012:11). However, this behaviour can change if the judiciary is seen to be very independent, neutral and the court systems have been left to be efficient without any undue influence in settling cases.

3.3.1.3 Innovation

Although scholarly works tend to assume that innovation is a term of the private sector (Moore & Hartley, 2010:56), it should be appreciated that innovation is equally no stranger to public sector performance. According to Pestoff and Brandsen (2010:231), innovation is "a significant change in the process of production" or "the ability to renew the collective structure of service provision in relation to skills, activities or even the underlying paradigm" (Pestoff & Brandsen, 2010:227). A similar understanding of innovation is articulated by Walker (2006, as cited in Ysa, Esteve & Longo, 2013: 99) who defines innovation as "a process through which new ideas, objects and practices are created, developed or reinvented and which are novel to the unit of adoption". In the public sector, for example, the paradigm shifts regarding the way public services have been provided over time such as centralised vs. decentralised systems, paper based vs. electronic-government, direct public sector provisioning, outsourcing, privatisation and the current PPP arrangements, are a reflection of innovative practices.

Reference is made to privatization and outsourcing to illustrate how PPP innovation transforms public service delivery. With the PPP delivery model, the public sector can tap into private sector knowledge and expertise, and share risks and gains with private sector organisations in order to improve service delivery, something that is unheard of in privatization (Greve & Hodge, 2010:153). On the other hand, some of the PPP innovative practices over outsourcing are: bundling project activities right from the design to operation under a special purpose vehicle arrangement rather than having multiple contracts, tendering being based on output rather than input specifications, and government relying more on private rather than public financing for public infrastructure investment. Ysa *et al.* (2013:99-100) contributes to the debate of public sector innovation by arguing that public sector innovations fall into five types, as described below:

- **New products to new users' innovation.** Is the provision of new public services or public goods to completely new beneficiaries?
- **Expansionary innovation.** Is the provision of an already existing public service to a new group of users, implying that the service being provided now is not new to the entire society, but to the current targeted beneficiaries who never had access to such services before.
- **Evolutionary innovation.** Occurs when a public organisation improves an existing service to satisfy the needs of its old and new users.
- **Organisational innovation.** The creation of new managerial practices or organisational features that are yet to be, or have already been, adopted for implementation.

- **Governance innovation.** Involves networks of organisations, or the collaborative transformation of complex social production systems, to provide better public services rather than focusing on changes solely within a particular organisation. It is through this perspective that PPPs have been viewed as a new governance arrangement for providing public services or developing public goods.

In view of public sector innovations, Ysa *et al.* (2013:100) concluded that any of the five innovation types above can be oriented towards the development of new/improved (products/services or organisational features), as shown in the illustration below:

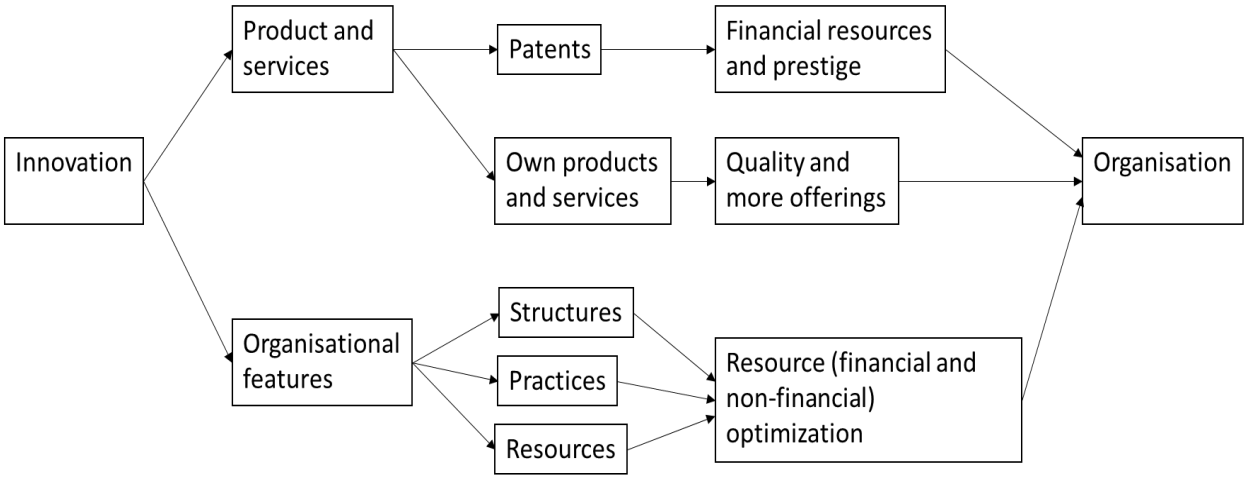


Figure 3.3. Innovation Types in Public Organisation

Source: Ysa *et al.* (2013:101)

Using a retrospective representation, Moore and Hartley (2010:64-68) underpin the innovation types developed by Ysa *et al.* (2013:99-101) by suggesting five ways through which innovations in the public sector can be created:

- **Creating network-based production systems.** Innovations should be evaluated not only on the basis of how an individual organisation improves productivity, but on how collectively all organisations in a given setting get focused on improving comprehensive society conditions.
- **Tapping new pools of financing, material resources and human energy.** Irrespective of whether the new resources being tapped are in different forms, say, monetary/non-monetary or are specific to the achievement of a given or multiple objective(s), one of the best ways to solve society problems is by identifying, mobilizing and utilizing resources that were previously side-lined or partially exploited.
- **Exploiting government's capacity to encourage and summon, and redefine private rights and responsibilities**. Government should not only rely on the use of its financial resources to

guide the actions of its employees or contractors but also utilise its regulatory and moral power to mobilize private and voluntary contributions towards making positive changes to the performance of public systems.

- **Redistributing the right to define and judge the value of what is being produced.** Even when the public sector directly engages the citizens, the private and voluntary organisations in determining what and how public services should be/was delivered, public sector agencies should ensure that other players remain loyal to the government and its purposes. In other words, where the other players tend to drift away from the delivery of a common good, government should recondition their decision rights for better results.
- **Evaluating the innovations in terms of justice, fairness and community building as well as of efficiency and effectiveness.** Irrespective of public innovations being implemented, good governance principles should be observed.

Finally, according to the interview findings from the Catalan and Tissue Bank, Ysa *et al.* (2013:106-110) established that innovations on PPP projects is enabled by two major factor categories:

Institutional factors: The type of institutional arrangement chosen to undertaken a project has a substantial influence on the level of innovation within a project. For example, projects developed via joint ventures see one or more partners facilitate interactions with other actors, resulting in more innovative resolutions.

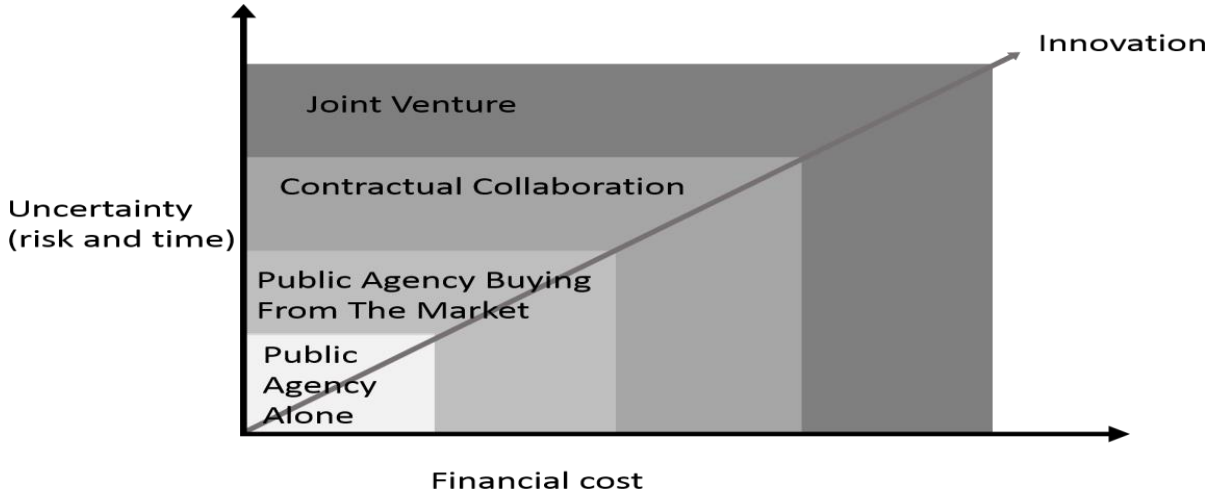


Figure 3.4. Institutional Arrangements Facilitating Innovation

Source: Ysa *et al.* (2013:106)

Figure 3.5 above demonstrates that the level of public innovations is influenced by organisational structures (government as a sole provider, public agency buying from the market, contractual

collaboration, and joint venture) of service provision with their associated financial costs and other uncertainties. For public organisations to realise high innovation outputs, it is required to devote high initial financial resources to maintaining relationships with private partners. In addition, given the long-term nature of PPP contracts, it becomes difficult to predict future circumstances with certainty, hence prompting greater innovation. Therefore, public organisations can effectively innovate by working collaboratively with private partners, which allows them entry into new markets, access to unique resources and capabilities, improved communication and information exchange, increased market power to handle government business, and reductions in liabilities of foreignness and government or trade barriers (Ysa *et al.*, 2013:107). In summary, although organisational arrangement can enhance innovation, they can also increase costs and uncertainties.

Leadership factors: The more collaboratively the public manager interacts with the network environment, the more productive the network becomes towards the delivery of public services. According to Ysa *et al.* (2013:108-110) there are three key drivers for achieving collaborative innovations, as explained below:

i) **Proactive personality.** Refers to taking an initiative in improving current circumstances or creating new ones.

ii) **Managers' networking.** Refers to those informal and formal contacts that public managers have with other organisations. Therefore, the more public managers interact with other actors from their environment, the more likely they are to develop organisational change.

iii) **Entrepreneurial spirit.** Entrepreneurs refers to individuals who have the ability to convince others to develop a change in a specific domain and are thus able to change organisations. Modern public management portrays entrepreneurial spirit either through personnel attributes (innovation, leadership, team-building, innate qualities, demographics) and/or situational attributes (networks of contacts, professional and community organisational memberships, affinity for local community).

In conclusion, the above discussions signify that innovations enable public sector organisations to remain efficient and effective in their core operations, while responding to the diverse changing needs of a modern society in order to continuously meet the citizens' aspirations (Moore & Hartley, 2010:53). In effect, an innovative public sector not only improves public service provision, but also facilitates the citizens' confidence that the public sector is credible enough to serve community interests.

3.3.1.4 Participation

In a democratic society, citizens are obliged to directly or indirectly participate not only in shaping the politics, but also in exercising great influence in the delivery of public services for the development of their nations (Yousaf *et al.*, 2016:201; Gisselquist, 2012:16). Any failure by public agencies or private partners to involve citizens in public service decision-making processes discredits the legitimacy of the government, hence leading to diminishing public support for future government interventions (Glaser, 2007: 92).

According to Pestoff and Brandsen (2010:227-228) the position of citizens in the delivery of public services can be strengthened through four methods:

- **Representative political democracy**. Where the interests of citizens as voters are taken on by their elected representatives through local councils or parliaments;
- **Participative democracy.** Where citizens or community groups are cooperative and self-organising for a common good, and voluntary organisations actively participate in the provision of social services;
- **Consumerism.** Where citizens are treated as customers and private providers always quickly respond to reported service delivery anomalies; and
- **Co-production.** Where the citizens, private sector, and the civil society are given an almost equal status with government in the efforts to improve community welfare.

In order to have constructive participation of all stakeholders in public service delivery processes, government needs to guarantee freedom of association and expression (Van Doeveren, 2011:309), and allow open competition for entrants into the PPP market unless the prevailing circumstances would require use of other procurement methods that are less competitive; and to also respond timeously to citizens' concerns and with utmost care and due diligence. The ideals of this principle are explored further in subsection 3.3.3 which deals with stakeholder management with stronger emphasis on the roles of the key PPP players.

3.3.1.5 Sustainable public management

Sustainable public management relates to the creation of public service conditions and systems that are adaptive to current and future changes in the institutional, social, economic, ecological, technological, political and legal environments in order to secure lives, create and safeguard properties and other public resources, and support the implementation of national development programmes for citizens' welfare (Dechev, 2015:235). For continued effective management of public resources in the future, governments need to have accurate data about the past and current trends to predict future strengths and

opportunities, weaknesses and threats of public service delivery in order to appropriately reform public institutions, policies, and administrative procedures that are transparent and sound to enlist the support of the citizens, the private, civil society and public sector organizations in the development of society (Gisselquist, 2012:7). In a nutshell, governments need to be sure about, the current and the desired future public service delivery status, the necessary strategies for achieving the future status, and should ensure the provision of the best public services on a sustainable basis (Graham *et al.*, 2003:5). Therefore, shortage of such information and response has disastrous effects on the delivery of public services in the future. For instance, the setting in of the 2008 global financial crisis saw several PPP investment projects either cancelled or suspended or renegotiated due to price increases which had not been promptly predicted ahead of time.

Glaser (2007:94) and Abdellatif (2003:25) perceive sustainability of public management from the principle of equity, whereby public service delivery institutions and processes thereof are meant to serve and create opportunities for the benefit of citizens as a whole, without giving any special treatment to the advantaged groups or marginalizing the disadvantaged groups of society. Meanwhile, Burger and Hawkesworth (2011:141) and Mwangi (2016:171) debate that sustainable public service delivery is achieved through a combination and trade-off between economy, efficiency and effectiveness - where economy is about minimising costs of inputs to produce the right output, efficiency refers to using the available resources to maximize outputs, and effectiveness means the maximisation of outcomes for every output delivered. Therefore, the public sector is in a position to deliver quality services and meet society's needs if: the provision of public services is free from political or any other form of interference; the available resources are put to best use; quality standards are established; and the government gets fully committed to ensuring that the existing policies are correctly implemented (Van Doeveren, 2011:308-309).

3.3.1.6 Transparency

Transparency relates to the general public's ability to freely access information and the willingness of government to provide reliable, comprehensive, understandable, timely, and internationally comparable information about the operations of public agencies, and having well-functioning systems that propel public and private partners involved in the provision of public services to behave ethically for the common good (Woods, 2000:826; Gisselquist, 2012:8). From a legal perspective, transparency is achieved when the citizens respect the prevailing society rules and an independent and incorruptible judiciary is in existence to assure the provision of public services in a fair and impartial manner (Van Doeveren, 2011:309-310). According to Greve and Hodge (2013:215), governments can never provide accurate information nor be transparent, as long as they continue to spend beyond what their nations can afford in order to sustain popular political support. In addition, globally, the PPP procurement

processes seem to be too weak to foster transparency. The World Bank Group (2016:3) reveals that, 23% of the world's PPP projects are tendered through unsolicited proposals, while 39% of PPP contracts in low-income countries are awarded on non-competitive terms.

Although information disclosure is essential for evaluating and determining government performance, the common trend with PPP projects is the exclusion of the public from decision-making processes. Examples to support this argument are well documented. Kalpana (2014b:69) claims that PPP negotiations are secretly handled and decision outcomes therefrom are never disclosed to the public, all in the name of commercial confidentiality. Again, on grounds of commercial confidentiality, in 2000 the UK government refused to disclose to its parliament the full details that surrounded the termination of contracts for 10 companies that had been providing support services to the National Health Service (Hood, Fraser & McGarvey, 2006: 44). Similarly, in 2001 the Australian parliament was denied access to a contract deed between the public sector roads authority and the private company for the M2 motorway project in New South Wales (Reeves, 2013:85). Hood *et al.* (2006:44) further noted that "neither the public nor the private sectors display adequate transparency in either their risk allocation or the apparent rewards flowing from the contracts". In conclusion, whereas confidentiality is one of the measures for effective information disclosure, it should never be used as an excuse for refusal or failure to disclose non-classified information or not to involve citizens in PPP dealings, unless such actions are a true reflection of the existing legal framework provisions.

3.3.1.7 Accountability

Accountability is the acceptance by an individual or institution to take up public service delivery responsibilities and thereafter be answerable to the citizens for one's actions (Forrer, Kee, Newcomer & Boyer, 2010:479). As Cheema (2007:32) asserts, accountability is therefore a pillar of "good governance that compels the State, the private sector, and civil society to focus on results, seek clear objectives, develop effective strategies, and monitor and report on performance". Consequently, accountability becomes a means of detecting errors, taking corrective action, eliminating corruption, promoting transparency, and whose sole target is bettering performance rather than punishing suboptimal performance (Peters, 2007:15-19).

Kalpana (2014b: 69) claims that PPPs have eroded public accountability as the questions of "who is accountable for what and to whom" remain unanswered. However, whereas the provision of accountability to the citizens is a cardinal role of government, the co-adoption of the private and civil society organisations in the delivery of public services does not take away the fact that the individual participating parties remain solely responsible for their actions. In fact, any actions that relate to exercising public powers or using public resources or providing public services demand for one's accountability (Reeves, 2013:80). In addition, though accountability on PPP contracts may take any

dimension depending on the situation at hand, in normal circumstances the private sector is directly accountable to the government, the government is directly accountable to the citizens and the private sector, and the civil society is directly accountable to the citizens. Importantly, while the private sector may perform most of the PPP project tasks, the public sector remains with the final responsibility for project performance (Sarmento & Renneboog, 2016:97).

Like any other public service delivery model, the quality of accountability on PPP projects has always been disputed. Some of the scholarly contributions towards improving PPP accountability are set out below. Reeves (2013:82-84) recommended the use of transparent value for money analysis, competitive contracting through rigorous tendering processes, well drafted contract documents and effective contract management, and exercising the external oversight function through auditing and scrutiny by parliament. Peters (2007:19-21) suggested a systematic performance based accountability approach that has eight steps: defining outcomes, defining outputs, developing effective measurement mechanisms, linking programs to outputs and outcomes, defining adequate standards, defining adequate improvement**,** defining responsibility**,** and linking inputs to outputs. Finally, Forrer *et al.* (2010:479-482) developed a framework with six dimensions that can be used to provide safeguards throughout the PPP project lifecycle.

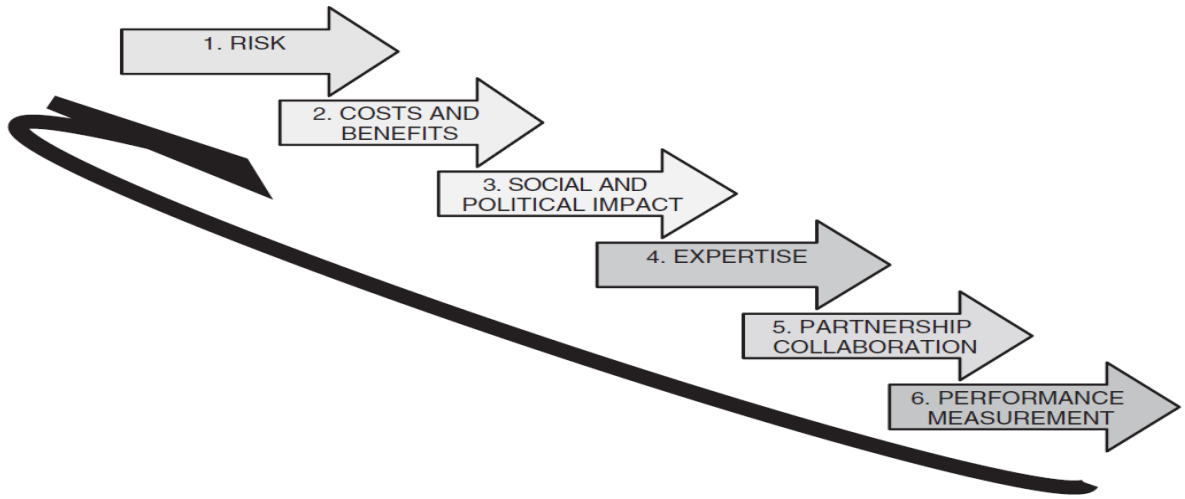


Figure 3.5. Public-Private Partnership Accountability Framework

Source: Forrer *et al.* (2010:479)

The extent to which the six dimensions in figure 6 above provide accountability safeguard measures is summarised below.

Risk. Effective project risks management requires identifying and understanding, negotiating and allocating each risk to a partner that has the relevant resources, expertise, and knowledge to control it in order to maximize public benefit through a well-prescribed contract. Therefore, “discovering the

appropriate balance of risk allocation ensures a greater accountability for the services delivered and their conformance to public expectations" (Forrer *et al.*, 2010:480).

Cost and Benefits. Cost benefit analysis as a way of controlling costs and ensuring benefits realization should be continued as the PPP project develops and conditions change until project contract closure time.

Social and Political Impact. Involvement of all stakeholders in the decision-making processes is paramount, since any perceived success or failure of PPP projects may result in the government gaining or losing support of its citizens. For instance, citizens often resist government programs because the opposition political parties and civil society organizations are fond of publicizing every public service delivery problem as a political crisis. Similarly, in the event that the ruling party loses an election, it may withdraw its support for future funding of PPP projects that were initiated during its tenure.

Expertise. Specialized skills, capabilities, experiences and resources required should be well specified in the bidding and contract documents, and the right partners should be engaged and their performance continuously checked and monitored to guarantee effective accomplishment of project tasks.

Partnership Collaboration. The level of cooperation and agility among and from each of the partnership members against the expected deliverable outputs should be clearly specified in the contract to enable effective monitoring for compliance, rewarding successes or punishing failures. In addition, PPP structures should promote effective leadership, consistent and clear communication, and effective project management as a means for building trust among the actors and ensuring performance sustainability.

Performance Measurement. The partnership agreement must have a set of balanced performance measures that capture the expected performance behavior and outcomes, monitoring and evaluation mechanisms, and should include practices designed to attract, motivate, retain and reward the best performers that meet government and citizens' expectations.

3.3.1.8 Networking

PPP arrangements take place in a network consisting of the government, the market, civil society, public organisations, community and individual citizens that are brought together through collaborative efforts of interdependent and interactive resources and processes, to deliver more and better public services to the citizens than what one or a few actors would accomplish on their own (Xu *et al.*, 2015:14; Walker, 2014:25). Because the public as well as other sectors have limited or lack certain resources, implies that none of them can fully achieve its objectives without utilising resources possessed by actors in other

sectors (Klijn & Teisman, 2003:1). Successful networking would therefore necessitate different actors uniting to share values, information and other resources towards generating innovative solutions for achieving a collective action (Klijn, 2010b:308-309).

However, the multiplicity of actors on PPP projects with diverse and often conflicting traditions, perceptions and interests complicates the smooth functioning of network based interactive processes, hence making the delivery of the expected public services very challenging. This view is shared with Klijn (2010b:307) who argues that "all actors demand a say in the decision-making process, and their inclusion makes decision making within governance network immensely complex". According to Alexander (2013:151) the improper governance of PPP networks is as a result of: lack of information and knowledge about causes and effects of ineffective networking; failure to identify the actual motives why each of the actors joined the network so as to provide appropriate treatments; ineffective or lack of inter-network communication; and the deliberate efforts by some of the actors following their own organisation's rules and norms while sacrificing those of the network.

To ensure that PPP networks produce improved public services on a sustainable basis, all actors must behave professionally, and must also handle policy and service delivery processes strategically. Verhoest *et al.* (2013:193) suggests that good governance of PPP is incumbent upon networks guaranteeing: interactions based on reciprocity, collaboration, trust and loyalty; resource exchanges based on complementary interests; equal status and fair treatment of all actors in the network; the joint development of policies in a web of interdependent partners; the resolution of conflicts based on the reputation of the members rather than sanctions; the measurement of network success not only being based on the achievement of goals but also on how the participants are satisfied with the processes; and whether an agreement on joint solutions to the identified problems is achieved. However, from the point of equal status of actors, Osborne (2010:9) argues that "inter-organisational networks are rarely alliances of equals". For instance, "government is a special actor with a monopoly over a number of resources" (Verhoest *et al.*, 2013:193) such as legislative, judicial and administrative powers. While from the perspective of resource exchange, specifically with information sharing, Klijn (2010b:309) argues that some actors may use the information shared freely from other players for their own selfish interests and benefit.

Whereas Verhoest *et al.* (2013:193) views PPP governance from networking characteristics, O'Toole and Meier (2010:325) perceive the performance of PPP networks being conditioned on public management functions within the environment; where the public sector should put efforts in managing the internal operations of the organisation, exploiting opportunities in the interdependent environment, and limiting the negative impact of the environment perturbations on the administrative system. Furthermore, O'Toole and Meier (2010:326) feature the roles of the public managers in PPP networks

to include: building support for program implementation among interested stakeholders; facilitating collaborative efforts at program execution with other involved organisations; protecting core production from threatening aspects of the organisational environment; linking or disconnecting networks actors from each other to improve policy execution; and using persuasion and bargaining skills to change the nature of the interdependent co-produced actions.

In summary, PPP networking has the capacity to improve public services delivery only when interdependent actors and interactive process complexities have been successfully navigated for effective management, and if the public managers execute their responsibilities with appropriate skills to enhance social capital. Finally, the stronger the level of trust among the various members of a PPP network the higher the likelihood for actors being more innovative towards solving complex policy problems for better performance (Klijn, 2010b:315).

3.3.1.9 Trust

Trust is an essential building block towards the understanding of PPP governance (Verhoest *et al.*, 2013:195). According to Muhwezi (2010:29) trust is one's belief that the partner will behave and act according to his or her promises with consistency. Scholars have operationalised trust differently but with many commonalities. Verhoest *et al.* (2013:195) refers to trust as the extent to which partners perceive each other as being credible, benevolent and acting with integrity. Where credibility reflects the partner's skill, competencies and expertise to perform effectively, benevolence is the belief that the partner will do good beyond egocentric interests, and integrity is the partner's compliance with the acceptable values and principles of the partnership. While Sako (1992:10) operationalises trust in three dimensions of: contractual trust, which is based on the belief that the other party will fulfil its promises and act as agreed; competence trust, which is based on the belief that the other party is capable of performing well a specific task(s); and goodwill trust, which focuses on the moral commitment to offer preferential treatment or help whenever a need arises without taking advantage of one's circumstances.

From the scholarly views above, it can be deduced that trust in PPP networks is based on formal and informal instruments conveyed through contracts, relational interactions, speculations, faith, reliance, and the confidence among the participating parties and their willingness to refrain from opportunistic behaviour in all dealings, even when avenues for acting opportunistically show up. According to Klijn (2010b:313) trust is a "favourable condition for the functioning of and for the achievement of positive outcomes in governance networks as it reduces transaction costs, facilitates cooperation and stability in network relations, and stimulates learning, knowledge exchange and innovation". Klijn (2010b:312) further noted that trust improves relative to the actor's previous experiences, and that unless trust is unremittingly upheld, it can never be sustained.

Notwithstanding trust being a necessary condition for collaboration, on the contrary, Vangen and Huxham (2010:168) cast doubt on its effectiveness given that it is "frequently very weak" and mulled with "suspicion and mistrust" in most PPP transactions. As a result, PPP engagements are predominantly based on contract and institutional rules in order to avoid risks and uncertainties that come with informal and relational mechanisms. Such a trend is prompted by, among others, the absence of confidence based on past experience of potential partners, and having inter-organisational participating actors with dissimilar characteristics (Verhoest *et al.*, 2013:195). As Klijn (2010b:309-311) states, PPP governance networks are synonymous with risks and uncertainties, and one accepting to trust another partner lends himself to opportunistic behaviour, unless rational decisions have been made through calculative risk taking.

Vangen and Huxham (2010:163-184) recommends several ways on how trust can be initiated, developed and sustained among PPP partners, which includes: forming expectations- whereby what needs to be achieved, who does what and in what capacity have been jointly agreed upon; managing risk - to avoid future vulnerabilities and opportunistic behaviour; managing power imbalances throughout the life of the project; managing knowledge transfer - to enable inter-organisational learning in order to develop and implement innovative solutions for improved performance; and nurturing collaborative relationships - by managing culture and network dynamics through orderly interactions based on effective communication, harnessing differences (such as perceptions, behaviour, professional expertise, organisational systems and procedures), and building cultural awareness to avoid misaligned expectations and stereotyping associated problems. In summary, trust is a core coordination mechanism of networks which: becomes stronger as interactions among actors improve through dedicated networks; facilitates fluent interactions and information flow; enables actors to develop innovative solutions within complex networks; becomes unnecessary without risk; and its success depends on reciprocal behaviour of the partners (Klijn, 2010b:305-312).

In summary, subsection (3.3.1) has identified a comprehensive list of principles of PPP good governance. These include value for money, dispute resolution, innovation, participation, sustainable public management, ttransparency, accountability, networking, and trust, and a discussion on how each of them should be applied for effective provision of public services through PPP arrangement was undertaken. The next subsection reviews and discusses PPP critical success factors as good governance mechanisms for public service delivery.

3.3.2 A REVIEW OF PUBLIC PRIVATE PARTNERSHIP CRITICAL SUCCESS FACTORS

Critical success factors (CSFs) are core aspects of an activity where things must be done correctly or in which favourable results are absolutely necessary for the achievement of organisational or project goals

(Chan, Lam, Chan, ASCE, Cheung & Ke, 2010: 484-494; Liu *et al.*, 2015:2). This subsection presents common PPP CSFs and the degree of importance of CSFs for PPP projects.

3.3.2.1 Common Public Private Partnership Critical Success Factors as highlighted in Literature

The critical success factors from Liu *et al.'s* (2015:2) publication on "life cycle critical success factors for PPP projects" were reworked to remove repetitive factors that appeared in the list of factors, as shown in Table 3.3 below. Therefore, Table 3.3 above provides a very clear, non-repetitive and comprehensive list of critical success factors that is user friendly for both practitioners and researchers.

Table 3.3. Critical Success Factors for Public Private Partnerships

Critical Success Factors for PPP Projects
special bid features, entrepreneurship and leadership, appropriate project identification, acceptable toll/tariff levels, selection of suitable subcontractors, knowledge and technology transfer, environmental impact, approval processes, existing strategic alliance, resource management, trust, feasibility studies, financial capability, complementary skills, effective planning, appropriate concessionaire selection, resource dependency, common goal symmetry, intensive communication, effective negotiation, robust business case, well drafted output specifications, efficient consultation with end-users, balanced performance measurement system, commitment and adequate resourcing of projects, appropriate composition of the project team, transparent and competitive procurement process, good governance, well-organized and committed public agency, shared authority between the public and private sector, appropriate risk allocation and sharing, good private consortium, favourable legal framework, provision of guarantees by government, multi-benefit objectives, stable macro-economic conditions, sound policies, favourable investment environment, economic viability of projects, sound financial package, business diversification, credit rating of investors, teamwork, existing infrastructure, delivery of asset, sound institutional frameworks, private sector financial objectives, value-for-money objectives and analysis, standardization of procedures, unifying specific vision, willingness to compromise/collaborate, respect, community outreach, expert advice and review, risk awareness, clear roles and responsibilities, shared responsibility, stable political and social support, judicious government control, asset quality, internal coordination within government, corporate governance, governmental supervision, clarification of contract documents, technical support and innovation, supportive project team and management actions

Adapted from Liu *et al.* (2015:2)

After presenting a comprehensive list of PPP critical success factors, the next subsection presents the variation in the impact of different CSFs on PPP project performance.

3.3.2.2 The degree of importance of the various CSFs to the success of PPP projects

To show the impact level of the various CSFs to PPP projects success, summaries of methodologies and results from five different publications are provided.

Chan *et al.* (2010:484-494) established 18 PPP critical success factors from literature and applied them in China using a questionnaire survey. After carrying out factor analysis, five factor groupings were created based on the assumption that each of the 18 CSFs is highly dependent on only one underlying group factor. In addition, the criteria for a variable appearing in a particular group was that it had a loading value greater than 0.50, and had generated the highest value in that group factor compared to

any other group. The five factor groups are stable macro-economic environment, shared responsibility between public and private sectors, transparent and efficient procurement process, stable political and social environment, and judicious government control, as captured in table 3.4 below.

Table 3.4. Public Private Partnership Critical Success Factors grouping based on Promax rotation of 18 Critical Success Factors

Item	Factor loading	Eigenvalue	Percent of variance explained	Cumulative percent of variance explained
Factor 1. Stable macroeconomic environment		6.735	37.414	37.414
Sound economic policy	0.814			
Favorable legal framework	0.800			
Stable macroeconomic condition	0.765			
Appropriate risk allocation and risk sharing	0.753			
Available financial market	0.735			
Multibenefit objectives	0.635			
Factor 2. Shared responsibility between public and private sectors		1.651	9.170	46.584
Shared authority between public and private sectors	0.834			
Commitment and responsibility of public and private sectors	0.798			
Project technical feasibility	0.757			
Thorough and realistic assessment of the cost and benefits	0.601			
Factor 3. Transparent and efficient procurement process		1.501	8.336	54.920
Competitive procurement process	0.897			
Transparency procurement process	0.812			
Well-organized and committed public agency	0.675			
Factor 4. Stable political and social environment		1.257	6.986	61.906
Political support	0.861			
Social support	0.834			
Strong and good private consortium	0.671			
Good governance	0.612			
Factor 5. Judicious government control		1.139	6.327	68.234
Government involvement by providing guarantee	0.805			

Source: Chan *et al.* (2010:489)

Note that higher factor loading value for a particular factor in a group signifies its greater contribution to PPP project success compared to other factors in the same group. For instance, sound economic policy, shared authority between public and private sectors, competitive procurement process, political support, and government involvement by providing guarantees have the greatest contribution in factor groups 1, 2, 3,4 and 5 respectively (see details in the factor loading column in table 3.4 above).

In a study by Alinaitwe and Ayesiga (2013:1-14), 32 PPP CSFs were identified from literature, and were applied on the construction industry in Uganda through questionnaire surveys to collect responses from construction companies, financial institutions and government departments. Thereafter, the factors were ranked according to their degree of importance. The results indicate that a competitive procurement process, a well-organised private sector, availability of competent personnel participating in PPP projects and good governance, are the most crosscutting PPP CSFs among the various PPP partners in Uganda.

From the review of literature, Aerts, Grage, Dooms and Haezendonck (2014:273-298) developed a list of 21 CSFs, which were subjected to a survey through a 7- point questionnaire Likert scale to determine the relative importance of the various factors on PPP port projects using average mean scores. The survey results indicate that the mean importance values among the 21 factors ranged from 6.29 to 4.25. Based on the results, the most important CSFs for PPP port project success are: concrete and precise concession agreement (6.29), clear definition of responsibilities (6.21), project technical feasibility (6.09), commitment of partners (6.06), and appropriate risk allocation and risk sharing (6.00). Meanwhile, knowledge transfer (4.25), community support (4.26), and reasonable debt/equity ratio (4.28) are the least important among the 21 CSFs studied.

Li *et al.* (2005:459-465) examined 18 CSFs identified from literature to determine the relative importance of each of the factors on the performance of PPP/PFI projects in the construction industry in the UK, using respondents from the public and private sector organisations through a questionnaire survey instrument. The results indicate that the five most critical factors for successful implementation of PPP/PFI construction projects in the UK are: strong and good private consortium, appropriate risk allocation, availability of financial markets, commitment of both public and private sectors, and thorough and realistic cost/benefit assessment. However, the five least critical among the 18 factors are: social support, shared authority between public and private sector, provision of guarantees by government, stable macro-economic policy, and multi-benefit objectives.

Osei-Kyei and Chan (2015:1335-1346) reviewed 57 research papers, published between 1990-2013, to identify CSFs for PPP projects. Regarding the criterion that a factor qualified to be of importance if it was appearing in at least two publications, out of 57 only 27 publications were considered for further analysis. Thirty-seven CSFs were found to meet the criterion, and these factors were later ranked depending on the number of times a factor was identified by an author(s). The number of times a factor appeared signified how superior that factor is compared to other factors. The results indicated that appropriate risk allocation and sharing, strong private consortium, political support, public/community support, transparent procurement, favourable legal framework, and stable macroeconomic condition greatly contribute to the success of PPPs. While factors such as environmental impact, reliable service delivery, consistent monitoring, financial accountability, employment of professional advisors, clear goals and objectives, good governance, well organised and committed public agency, sound economic policy, good leadership and entrepreneurship skills, choosing the right partner, and compatibility of parties, are relevant but with a very low impact.

In summary, the above reviews have shown that each PPP CSF may have different impact levels on different sectors, actors, countries, and across projects. With regard to scholars, the research results may differ depending on the methodologies and the category of respondents used. However, the key

observation is that no matter the dynamics in the PPP operational environment or research pattern, CSFs of a strong private sector, transparent procurement, and appropriate risk allocation and sharing have the greatest contribution to the success of any PPP project. In conclusion, as much as all CSFs are essential for the successful implementation of PPP projects, some are more important than others, implying that the highest impacting CSFs should be accorded more attention and effort compared to those CSFs with lower impact on project success. The next subsection discusses the effective management of stakeholders and highlights the roles and responsibilities of the key PPP players.

3.3.3 STAKEHOLDER MANAGEMENT

From a PPP perspective, a stakeholder is any institution or individual that has interest and/or the power to influence project transactions and outcomes. As such, a shareholder affects the success of a project or is affected by the implementation of a project. For instance, according to Martin *et al.* (2013:17) PPP projects are unsuccessfully implemented because of lack of a sense of project ownership and commitment from the public. On the other hand, effective stakeholder engagement in decision making processes promotes a shared vision, minimises project opposition, improves investment needs assessment, strengthens citizens' trust in government actions, enhances project partners' credibility, and encourages commitment from politicians and citizens for public investment projects (OECD, 2015:22; Felsinger, 2011:20-21). In fact, full support from all the project stakeholders is a recipe for effective provision of public infrastructure facilities and services through faster and quality project deliveries, and minimised project conflicts and cancellations.

Stakeholder involvement in PPP project decision-making processes has been associated with many intricacies. Felsinger (2011:20-21) cites problems relating to a multiplicity of stakeholders with divergent roles, interests and concerns that are difficult to reconcile and monopolistic control over PPP information flow by a few stakeholders. For instance, governments selectively disclose PPP project information in order to avoid future public uprising in case certain project targets are never realized. Meanwhile De Schepper, Dooms and Haezendonck (2014:1210) relate stakeholder participation problems to a mismatch in the application of reactive and proactive approaches of stakeholder management, lack of guidance on stakeholder responsibilities, accountability complexities associated with PPP projects, and the perception that stakeholder inclusion is "an activity that consumes substantial amount of resources and time".

Instead of take advantage of the diversity of experiences, skills, knowledge, and information as a valuable means of improving PPP products and processes, it would be irrational for any stakeholder to think that by behaving in a non-transparent and discriminatory way, and deliberately avoiding accountability, better results would be produced. Hence, the different roles and interests of each stakeholder are meant to strengthen the partnership relationship (Kalpana, 2014a:17) rather than weaken

it; and as Felsinger (2011:22) argues, participation of all stakeholders in PPP processes is a critical factor for project success. Unless all project stakeholders are known, and their roles and interests have been clearly identified and effectively managed, PPP projects are bound to receive a lot of resistance. Figure 3.7 below indicates the different interests of some of the key PPP stakeholders.

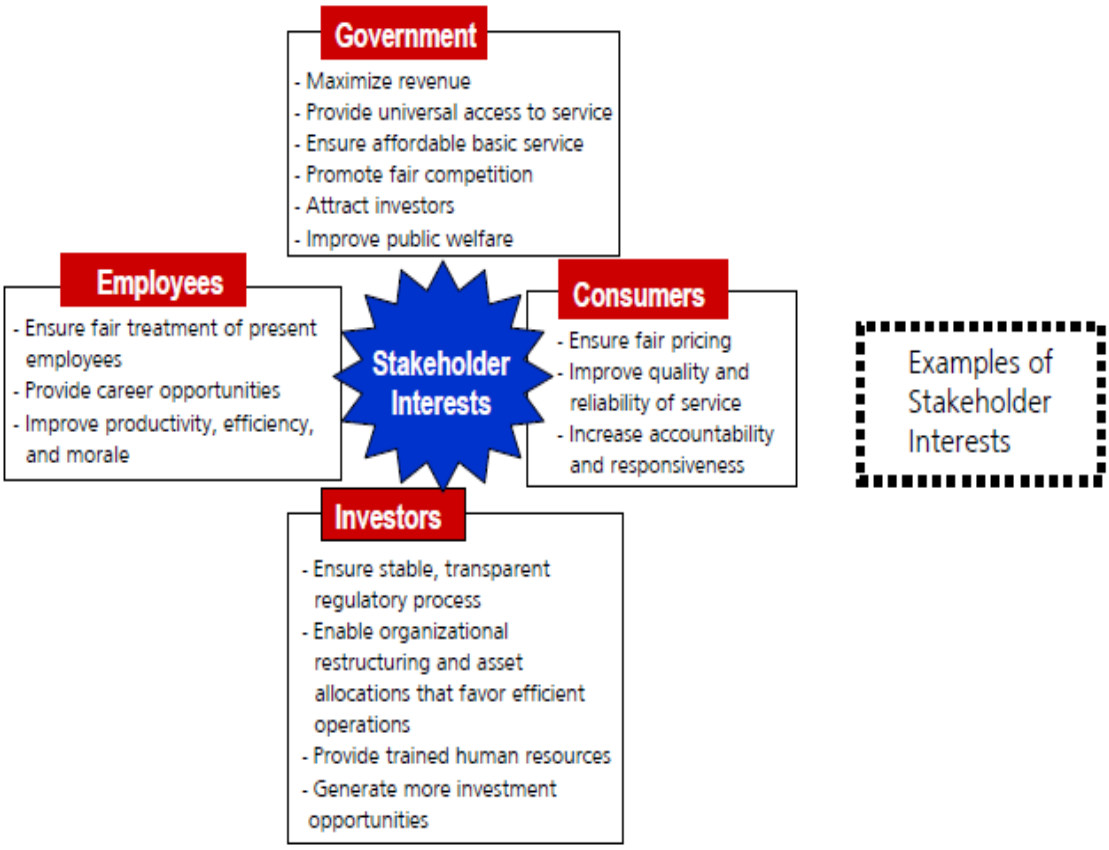


Figure 3.6. Stakeholder Interests in Public Private Partnership Arrangement

Source: Felsinger (2011:22)

All stakeholders should be given an opportunity to actively participate in PPP processes and freely share their concerns about the project, and in turn accurate information about the project progress and transaction processes should be frequently provided to them. For instance, in Australia and the United Kingdom, stakeholder consultation is necessary at every stage of a PPP project (Martin *et al.*, 2013:17). In order to build collective support for PPPs, Felsinger (2011:22-23) recommends creating stakeholder iterative communication programs customized to the local and PPP context, such as opinion research, stakeholder consultation, public awareness and public education. For instance, during project designing, potential bidders' input should be sought (through bid conference and bidding document consultation), and after bidder engagement sessions, all bidders should be sent full responses relating to concerns raised during the meetings (Felsinger, 2011:68). On ethical and professional grounds, no stakeholder

should misuse his/her roles with their attendant responsibilities to satisfy individual selfish interests. Stakeholder interests should be advanced and met using channels and processes that promote the common good. Therefore, the execution of one's duties necessitates a high level of cooperation and treating all partners with respect if productive PPP outcomes are to be sustained (Kalpana, 2014a:18).

In the remaining part of this section, we provide a detailed account of the responsibilities for the public, private (for profit), and third (private not for profit) sectors because of their active involvement in PPP transactions and processes.

a) The Public Sector

The Public sector's responsibilities include, but are not limited to: defining public services required and the availability of resources to undertake them; specifying the project priorities, targets and outputs; executing procurement processes; setting performance standards and monitoring performance; taking corrective action in case of failure of any party to comply with standards; managing community expectations; providing an enabling environment for PPPs to flourish, and issuing permits, licences, authorisations, contracts and any other documents that are within its powers for project work to be pursued (Kalpana, 2014a:24).

Furthermore, due to the key regulatory role the PPP Units play in the countries' PPP agenda across the world, it was decided to highlight its responsibilities here. A PPP unit is established as a point of coordination, quality control, accountability, and with specialised management personnel that provides information related to PPPs, either within a single sector or across a range of sectors. The PPP Unit responsibilities include but are not limited to:

- Development of general PPP policies;
- Development and management of the national PPP programme;
- Issuing regulations and clarifications regarding rules, procedures and standards for PPP projects and project documents to public entities;
- Issuing decisions to public entities for the purpose of ensuring proper implementation of laws and regulations related to PPP projects;
- Review and approval of projects and proposed amendments to agreements;
- Approval of the economic support to PPP projects;
- Oversight and review of performance compliance and project execution;
- Management of a national PPP registry;
- Making decisions relating to the use of funds deriving from PPP appropriations;
- Providing technical assistance and training to central and local government officials;

- Spearheading promotional activities for PPP projects;
- Ensuring effective use of public resources;
- Supporting project teams in the hiring and use of external expertise (Felsinger, 2011:52-54; Infrastructure Consortium for Africa-ICA, 2009:50).

b) The Private (for profit) Sector

The private sector responsibilities include, but are not limited to: providing defined services to the required standard; designing and constructing the infrastructure asset; raising funds for the capital needs of the project; focusing on the government's objectives and responding to variations in the project environment; may also maintain and operate constructed facilities for some time; and return the assets in the specified condition at the end of the contract (Kalpana, 2014a:23).

In addition, because of the recent trend where the public sector requires private sector to participate in PPPs under Special Purpose vehicle (SPV) arrangement, it was decided to highlight the responsibilities of the SPV here. SPV is a separate legal entity company created specifically for a specific PPP project, which brings together the public partner, the sponsors, financiers, subcontractors and other actors such as advisers to implement PPP contract tasks (Reim, 2009:4-5). PPP advisors will be covered in detail later in the section. The relevance of SPV arrangement is that the sponsors are protected from any liability as individual organisation, assets and liabilities of SPV do not appear on the balance sheet of individual sponsors, and since no sponsor is supposed to have more than 50% share in the SPV, the projects are protected from the impact of one of the sponsors running bankrupt (Kalpana, 2014a:24).

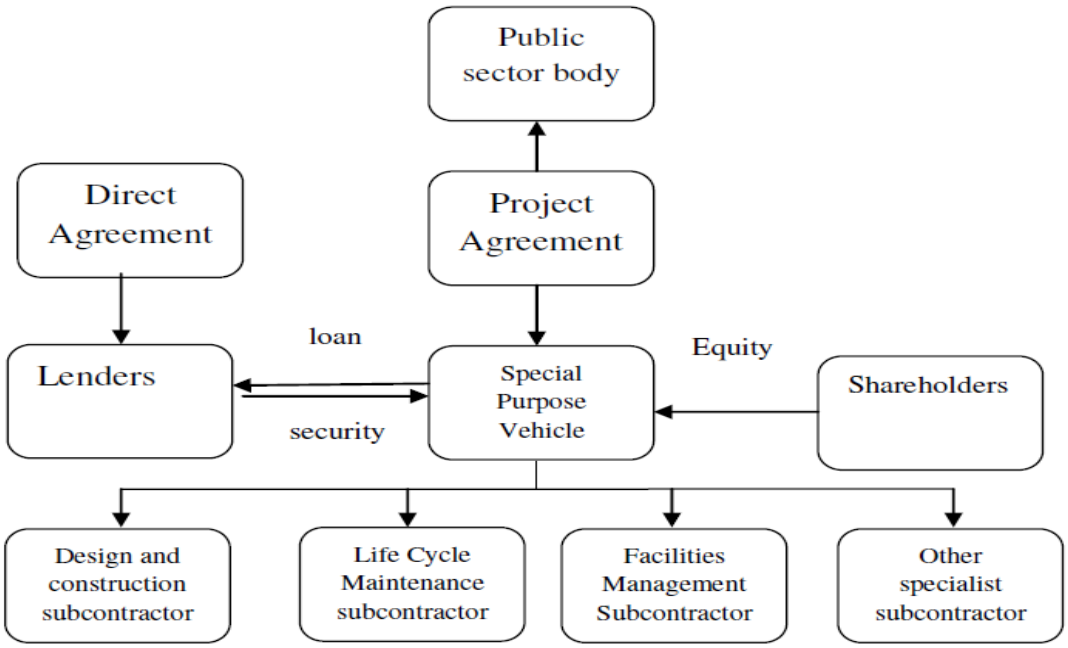


Figure 3.7. A Typical Contracting Structure for a Public Private Partnership Project Under a Special Purpose Vehicle arrangement

Source: Heybati, Roodposhti, Nikoomaram and Ahmadi (2011: 3513)

The SPV structure provides two main partnership contract arrangements. The SPV company enters into a contract with a public contracting agency and, simultaneously, the SPV forms contracts with private companies that have to support project implementation and operations. The agreement under the SPV arrangement requires government to pay for services provided and facilities constructed (either through availability fees, shadow tolls or user toll payments), the subcontractors have to be paid on condition that they perform their tasks, the lenders provide funds in the form of loans and expect payment of the principal and interest from SPV, and the shareholders contribute capital and expect to be paid dividends in return. Importantly, the government must closely monitor the formation and operation processes of the SPV company in order to guard against future problems that may accrue from sure relationships among companies in the consortium (Sarmento & Renneboog, 2016:98).

Another branch of the private sector worth covering here are the PPP external advisors. It is indispensable for a PPP project to succeed without guidance of experts from different professions. The cardinal role of advisers is to provide appropriate advice in their area of expertise to the project management group, and the team of advisers includes technical, financial, legal, environmental, and separate social impact and insurance advisers which may as well be required (ICA, 2009:48-49). The responsibilities for the PPP advisors are highlighted in figure 3.5 below.

Table 3.5. The Responsibilities of Public Private Partnership External Advisors

Technical Advisers	**Legal Advisers**
❖ Participate in the formulation of project strategic plans and specifications ❖ Develop payment mechanisms in consultation with the financial adviser ❖ Evaluate and advise on all technical procurement issues and proposed solutions ❖ Undertake technical due diligence on bidders' solutions ❖ Carry out any site condition, planning and technical design work	❖ Advise on the legal feasibility of the project and the powers of the public agency to enter into a PPP contract ❖ Advise on the appropriate procurement route and the suitability of all the procurement related documents. ❖ Ensure bids meet the legal and contractual requirements ❖ Develop the PPP contract documents, and provide assistance in all legal matters throughout the life of the project
Financial Advisers	**Environmental Advisers**
❖ Provide specialised advice on all financial matters during business case development ❖ Advise on appropriate sources of funding and how funds can be secured ❖ Evaluate and advise on financial proposals throughout procurement processes ❖ Advise on the bankability and taxation issues, and interest rate and currency hedging matters ❖ Undertake financial due diligence on the submitted bids ❖ Assist in the negotiations with the lenders	❖ Examine the potential environmental impact of the project ❖ Identify potential environmental risks and how submitted bids address them ❖ Advise on the mitigation measures for the risks identified and their impact on the scope and technical design of the project ❖ Assist in environmental due diligence, including required permits and certifications

Developed from ICA (2009:48-49) and European PPP Expertise Centre-EPEC (2011:17)

The scope of work for each advisory team should be well known before the release of a bid notice and all advisors must be contracted through a competitive bidding process, while the evaluation criteria should include: the relevance of the adviser's expertise, their understanding of project requirements and processes, the cost of providing advisory services, and information relating to individual consultants on each team. In fact, the experience of individual consultants in each advisory team combined is more relevant than the reputation of the advisory firm per se (ICA, 2009:47). For the public entity to minimise the burden of managing many advisory contracts, a lead advisor can be contracted and allowed to subcontract other advisors. However, ICA (2009:51) argues that in more mature PPP markets, advisers are generally appointed separately in order to have the most appropriate advisers in each speciality.

In order to draw the best out of the advisory team, the public agency should openly provide adequate information about all the agency's PPP processes and decisions, to enable the advisers to understand the project objectives and challenges to provide valuable advice (ICA, 2009:47). For the public agency

to effectively track the performance of advisors, regular meetings should be scheduled as a tool for monitoring performance and taking corrective action. Furthermore, before proceeding to another stage of project execution, the advisers should sign off to confirm successful completion of the current stage, and also verify whether the proposals and timetables for the subsequent stage are realistic and achievable. However, in instances where the advisers are not comfortable with the project proceeding to the next stage, their objections and decisions should be formally recorded (ICA, 2009:51). Finally, it is good practice to pay advisers in a phased manner upon successful completion of all the tasks of a given project stage or activity, to avoid paying for no work done or paying for substandard services.

c) The Third (private not for profit) sector

The third sector is the part of the economy or society which consists of non-governmental and non-profit-making organizations or associations such as charity and voluntary groups, civil society organisations, and community cooperatives. The roles of the third sector include, but are not limited to: advocating for citizen's accessibility to equal and quality services from government; co-production of public services alongside and in collaboration with government (e.g. donating funds for construction, maintenance or operation of facilities); provision of goods and services (e.g. legal services) to vulnerable groups without expecting compensation; supplementing government's oversight responsibilities over PPP transactions (hence reducing government's monitoring costs); and they are expected to work as "a go between" to other actors (government, private for profit companies, and the citizens) in order to build networks of trust, reciprocity and social capital for the smooth implementation of PPP projects (Amirkhanyan & Pettijohn, 2013:118).

In conclusion, all project stakeholders should be collaboratively informed, involved, consulted and supported through effective and transparent communication throughout all the stages of the PPP project. In addition, establishing appropriate management processes in identifying and addressing stakeholder concerns, and reconciling their differences to realize everyone's full support for achieving project objectives, is critical to the overall PPP project success. The next subsection discusses PPP development trajectory phenomenon with a special focus on selected African countries.

3.3.4 THE PUBLIC PRIVATE PARTNERSHIP DEVELOPMENT TRAJECTORY

This subsection underscores the contribution of various factors in providing a conducive environment for PPPs, discusses the African PPP maturity context, and highlights strategies and steps for how countries can achieve a level of PPP mature markets.

The pace at which PPP systems develop is contingent on a country's social and economic development needs, and the capacity and willingness of both the public and private sector institutions to devote

sufficient resources towards creating robust PPP environments that would speed up the development of public infrastructure and service delivery improvements (Nel, 2014:49; OECD, 2007:30). Although both developed and developing countries are good at identifying development objectives, they, however, remain at different levels of PPP development. In fact, whereas developing countries fail to meet most of their infrastructure development needs because of resource capacity constraints and poor governance of PPPs, the developed world has had successful PPP regimes in almost all sectors. For instance, the world's mature PPP markets are found in "the United Kingdom for schools, hospitals and defense facilities; Australia and Ireland for roads; and the Netherlands for social housing and urban regeneration" (Eggers & Startup, 2006:6). Nevertheless, less developed PPP markets are better placed to move more rapidly and leapfrog to more advanced stages of maturity than the present mature PPP markets were able to (Eggers & Startup, 2006:6). Such reasoning is premised on the assertion that emerging PPP markets not only have the opportunity of learning from and using more innovative PPP approaches already developed by PPP mature markets, but they also easily attract assistance from multilateral organisations such as the World Bank for building capacity and funding their PPP transactions (Eggers & Startup, 2006:6).

Nearly every PPP subscriber admits that creating a conducive environment through a country's clear and well-developed PPP Path improves infrastructure development in a sustainable manner. Notwithstanding the fact that several publications have hinted about PPP conducive environments, this section only contains a reflection on scholarly contributions made towards the development of mature PPP markets. Eggers and Startup (2006:6) assert that, under normal circumstances, countries systematically go through three stages of PPP development to realise full PPP maturity, that is moving from stage one to stage three (see table 3.6 below).

Table 3.6. Development stages towards Public Private Partnership Maturity

Stage One	Stage Two	Stage Three
✓ Establish policy & legislative framework ✓ Initiate central PPP policy unit to guide implementation ✓ Develop deal structures ✓ Get transactions right & develop public sector comparator model ✓ Begin to build marketplace ✓ Apply early lessons from transport to other sectors	✓ Establish dedicated PPP units in agencies ✓ Begin developing new hybrid delivery models ✓ Expand and help shape PPP marketplace ✓ Leverage new sources of funds from capital markets ✓ Use PPPs to drive service innovation ✓ PPP market gains depth, as its use is expanded to multiple projects & sectors	✓ Refine new innovative models ✓ More creative, flexible approaches applied to roles of public & private sector ✓ Use of more sophisticated risk models ✓ Greater focus on total lifecycle of project ✓ Sophisticated infrastructure market with pension funds & private equity funds ✓ Public sector learns from private partner methods as competition changes the way government operations function ✓ Underutilized assets leveraged into financial assets ✓ Organizational & skill set changes in government to support greater role of PPPs

Source: Eggers and Startup (2006:6)

All the conditions at each stage have to be met before moving to the next one, unless a country's PPP systems have been exposed to a leapfrog effect. The majority of developing countries are still at stage one and a few at stage two, while the majority of the developed countries are at stage two and a few at stage three of the PPP development trajectory.

The Infrascope report (2015) by the Economist Intelligence Unit (EIU) Ltd assessed the maturity of PPP environments in 15 African countries relating to dimensions of legal and regulatory framework, institutional framework, operational maturity, investment climate, financial facilities, and subnational adjustment factor, with weight scores of 25%, 20%, 15%, 15%, 15% and 10% respectively. Note that, the higher the weight score assigned to a factor, the greater its impact on PPP maturity. In this study, the results from the Infrascope report (2015) have been recomputed to have weighted scores per factor

in order to rank factors and countries according to their level of PPP maturity, as reflected in table 3.7 below. Formula used to calculate the weighted score per factor is as follows:

Weighted score per factor = $\frac{Factor\ Score}{100} * Weighted\ score$

Table 3.7. Public Private Partnership enabling Factors' and Countries' Performances in Africa

Country	Legal & regulatory framework (weighted 25%)	Institutional Framework (weighted 20%)	Operational maturity (weighted 15%)	Investment climate (weighted 15%)	Financial facilities (weighted 15%)	Subinational factor (weighted 10%)	Total score/ 100	Country Ranking
South Africa	18.75	15	11.25	6.96	13.755	5	**70.7**	1
Morocco	14.075	10	8.445	8.895	7.92	2.5	**51.8**	2
Kenya	16.4	10	6.09	8.04	8.34	2.5	**51.4**	3
Egypt	14.85	10	7.965	8.19	4.995	5	**51.0**	4
Tanzania	12.5	10	6.54	8.715	5.835	5	**48.6**	5
Côte d'Ivoire	13.275	10	5.16	8.715	5.835	2.5	**45.5**	6
Tunisia	12.5	10	4.695	9.015	6.66	2.5	**45.4**	7
Uganda	9.375	10	7.035	7.845	5.835	5	**45.1**	8
Rwanda	11.725	6.66	4.665	9.195	6.255	5	**43.5**	9
Ghana	12.5	8.34	5.16	8.715	5.835	2.5	**43.1**	10
Cameroon	10.95	5	4.695	8.37	4.17	5	**38.2**	11
Nigeria	7.825	5	6.09	7.89	4.995	5	**36.8**	12
Zambia	12.5	5	3.75	5.88	4.59	2.5	**34.2**	13
Angola	7.025	3.34	5.625	7.89	4.995	2.5	**31.4**	14
Democratic Republic	5.475	3.34	0.945	7.515	0.84	2.5	**20.6**	15
Realised combined countries' total score per factor	**179.7**	**121.7**	**88.1**	**121.8**	**90.9**	**55.0**	**657.2**	
Mximum expected combined countries' total scores per factor	**375**	**300**	**225**	**225**	**225**	**150**	**1500.0**	
Combined countries' factor contribution to PPP maturity (%)	**47.9**	**40.6**	**39.2**	**54.1**	**40.4**	**36.7**	**43.8**	
Factor rankings	**2**	**3**	**5**	**1**	**4**	**6**		

Developed from the Infrascope data report (2015:12-22)

As of 2015, apart from investment climate, the rest of the individual factors perform below average. In comparing the degree of PPP maturity of the individual factors, investment climate is performing better with a 54.1% weighted score, followed by legal and regulatory frameworks (47.9%), institutional frameworks (40.6%), financial facilities (40.4%), operational maturity (39.2%), and subnational factor (36.7%). It is also observed that the pattern of the individual factors' contributions may not exactly be consistent with the total scores across countries. For instance, South Africa which has the highest total score of 70.7, is instead the worst performer on the dimension of investment climate (with a 6.96 score) among the 15 countries.

Although Africa's PPP maturity has been improving substantially in the recent past, its PPP environment is still wanting since out of the 15 countries used in this study, only four countries scored above average and none of the countries scored above 70.7. In addition, Africa's PPP maturity on the global scale is still lagging behind. For example, a similar study that was carried out in Asia-Pacific in 2014, shows ten countries having scored above average and the highest scores were 91.8 and 88.1

(Infrascope Report, 2014:15). The Infrascope report (2015:9-11) attributes Africa's PPP maturity problem to: lack of robust local hedging instruments and financing markets, and overreliance on external financing; lack of or improper harmonisation of PPP practices among ministry level agencies, and between national and sub-national levels; political distortions; lack of effective stakeholder engagement over tariffs, tolls and fees; slow progress in the passing of PPP laws and low speed in project development; for some countries fiscal risks and public debt are not factored into fiscal frameworks; and many countries have relatively good PPP laws but their implementation is always compromised.

From the results in table 3.7 above, we construct a PPP development curve using four PPP market classifications with their respective score ranges, as shown in figure 3.9 below.

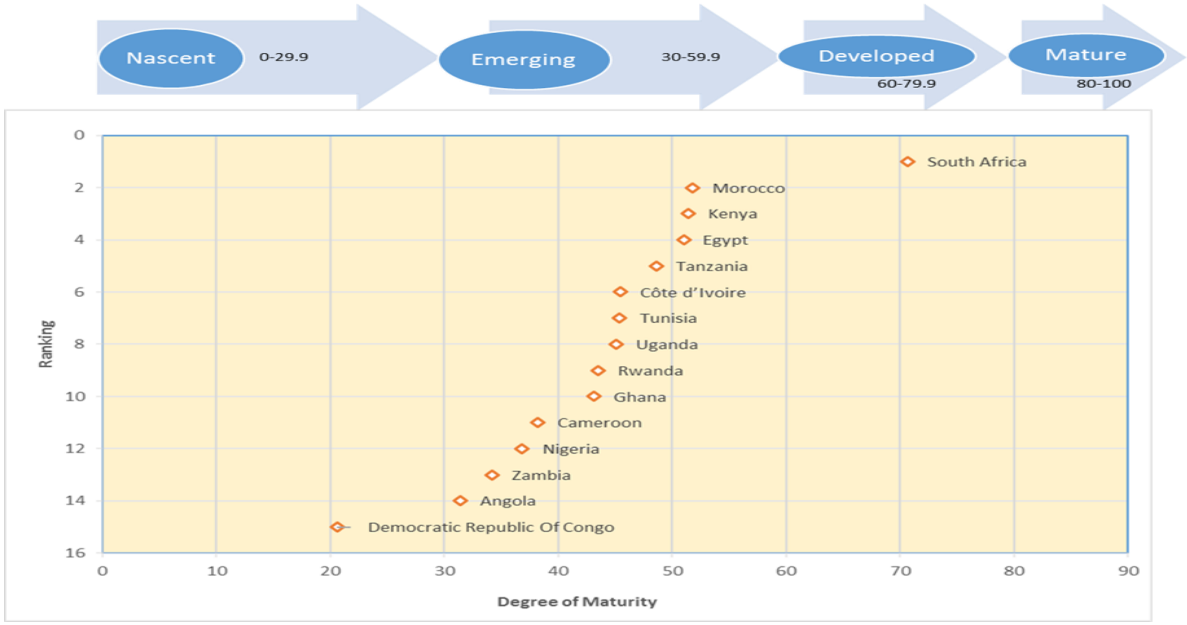


Figure 3.8. The PPP Maturity Curve for Selected Countries Across Africa

Developed using raw data from Infrascope report (2015)

The PPP maturity curve above is developed from the total scores (degree of maturity) of each country, which are used to determine countries' rankings and the PPP market development category to which each country belongs. With reference to the figure 3.8 above, the Democratic Republic of Congo is at the bottom end of the maturity curve because its performance is too weak across PPP enabling factors, except for sub national and investment climate factors on which average performance is realized. Meanwhile, South Africa tops the rest of the countries and performs better than all the other countries on each of the PPP enabling factors, except for investment climate. South Africa's poor investment climate can be attributed to xenophobic acts, violent demonstrations, continuous political unrests such as the past "Zuma must fall movement" and the current "land expropriation without compensation

campaign" by the Economic Freedom Fighters and the governing African National Congress, unpredictable national currency value, and the country's past record of racial discrimination. Generally, the majority of the countries lie in the emerging PPP market category but with varying degrees of PPP maturity.

In conclusion, for developing countries to register tangible PPP transitioning, their governments need to: develop sound PPP frameworks aligned to project lifecycle processes; understand and use appropriately the existing PPP innovations across the global to hedge against negative risk impacts; develop PPP projects that fit with in their country's operational situation and development needs; and they should begin to consider using PPP transactions to put to good use the previously underutilised and undervalued resources such as land and buildings to secure funds for developing new public infrastructure facilities.

3.3.5 PUBLIC PRIVATE PARTNERSHIP RISK MANAGEMENT

Risk is the possibility of adverse events occurring and subsequently causing deviations in actual project outcomes or threatening the successful completion of projects (Aldrete, Bujanda & Valdez-Ceniceros, 2010:16; Manrique Millones, 2010:34; Reim, 2009:7). As such, PPP risks arise from the uncertainty about the future occurrence of some events and their impact on project activities (Yong, 2010:15). Therefore, risk erupts when vulnerable PPP conditions is exposed to a threat (Burger, Tyson, Karpowicz & Coelho, 2009:5). Although some scholars have perceived risk to have negative as well as positive impacts, this thesis only subscribes to discourses that regard risk as having negative consequences. In fact, this section is anchored on the argument that, a positive impact on public infrastructure development and service delivery is only possible when PPP risks have been appropriately managed. Because PPP projects are conducted within a very diverse and evolving environment, they tend to be exposed to numerous risks. Common risks associated with PPP projects is included in table 3.8 below.

Table 3.8. Classification of Public Private Partnership Risks

Risk classification	Examples of risks
Political	Nationalization of assets, termination of concession without appropriate compensation, political/public opposition, corruption, poor decision making processes
Commercial	Inflation, fluctuations in interest and currency exchange rates, tariff changes, poor financial markets and hedging instruments, restrictions on currency convertibility and transfer of profits, price changes, changes in monetary policies, construction of competing alternative facilities (e.g. toll free roads), inability of government to pay creditors and other services providers, refinancing problems
Legal	change in laws and new policy enforcement, change in contract obligations, inappropriate legal and institutional frameworks, Poor contracts supervision

Relationship	Lack of commitment from government or private party, poor organisation and coordination
Planning and procurement	Improper designs and specifications, high costs and longer planning time, changes in technical standards, poor solution to public need, inadequate competition for tender, land acquisition problems, delays in project approvals and permits, inconsistences in documentation, lack of experience to effectively handle PPP processes, poor negotiation, excessive contract variations and late changes to designs
construction	Inadequate cost management, construction changes, poor quality, changes in site conditions, construction delays, protests, delayed approvals and permits, non-performance by the private party, ineffective construction practices, conflicting or imperfect contracts
Operating and maintenance	Delay in operation, quality defects, high costs, shortage of skilled labour and labour disputes, poor maintenance schedule, inadequate cost management, late delivery of equipment and materials, changes in citizen's service preferences, lower traffic volume, lower residual asset value, lack of supporting infrastructure, technological system outages, contract violations, fall in the demand for services, partial or non-availability of services
Force majeure	Unforeseen weather conditions, geotechnical conditions, wars, natural disasters

Developed from Manrique Millones (2010); Iossa, Spagnolo, and Vellez (2013); Thieriot and Dominguez (2015); Abednego and Ogunlana (2006); Eldrup and Schutze (2013); Rothballer and Kim (2013:46).

The identification of risks by classifications in table 3.8 above intimates that PPP risks arise from different environments. For instance, the political, commercial and legal risks are largely triggered by public sector structures and conditions of a country. The force majeure risks are mainly caused by natural, and to a lesser extent, by man-made conditions, and tend to be outside the direct control of any of the PPP parties. As for relationship, planning and procurement, construction, and operating and maintenance, risks relate to changing conditions within the project lifecycle mainstream activities, and these would be easy to control when all PPP participating parties cooperate and are committed to project transactions. Therefore, PPP projects risks can be comprehensively known and effectively managed when they are identified by the source of their cause. Whereas some of the risks such as cost overruns, delays, and poor quality and documentation overlap across risk classifications, the frequency and magnitude of their impact differs within different PPP operating environments.

3.3.5.1 Assessment of Key Mechanisms of Public Private Partnership Risk Management

Given that most of the sections and subsections in this chapter in one way or the other tackle risk management issues, this subsection therefore only limits the assessment of risk to PPP forms, government guarantees, renegotiations, and risk allocation and risk management strategies.

a) Public Private Partnership Forms

Connolly and Wall (2013:36) cite the sharing and transfer of responsibilities through contractual arrangements as one of the best ways to manage project risks. In addition to contract terms and conditions, in a typical PPP environment, various forms of PPPs are used to distribute project responsibilities between the public and private sector parties as a means of containing the occurrence of risks and their negative impact on public service delivery outcomes. Table 3.9 below provides a narrative summary of the responsibilities assumed by the private and public sector actors in each PPP form.

Table 3.9. Description of Public Private Partnership Forms

PPP Form	New or Existing	Description
Design-Build (DB)	New	The public sector contracts a private sector organisation to undertake most of the design work and all the construction tasks of the projects at a fixed fee. The provision of funding throughout the project, and the operating and maintaining of the facility after its construction is the sole responsibility of the public sector.
Design-Build-Maintain (DBM)	New	The public sector contracts the private organisation to carry out the design and construction works, and thereafter maintain the facility during its usage. The public sector remains responsible for all the funding needs and operation of the facility.
Design-Build-Finance (DBF)	New	The public sector contracts the private sector organisation to design, construct and provide partial or full funding for the construction phase. The public sector retains responsibility over long-term operation and maintenance of the project.
Design-Build-Operate (DBO)	New	The private sector designs and constructs the public facility, and is handed over to the public entity upon completion. Thereafter, the public sector grants permission to the same private company to operate the facility for a defined period. In addition to having full ownership rights, the public sector is also responsible for funding the designing, building, as well as paying the private sector company for operating the facility.
Lease-Operate-Maintain	Existing	The public sector leases a public facility to a private organisation for a definite period. The private partner becomes responsible for maintaining and operating the facility as per the leasehold agreement. However, the ownership and investment decisions of the infrastructure remains entirely a responsibility of the public sector.
Design-Build-Operate-Maintain (DBOM)	New	The private sector assumes the responsibilities of designing and constructing the public facility, as well as operating and maintaining the same facility

		for a specific period. The public sector remains responsible for all financing needs of the project.
Design-Build-Finance-Operate (DBFO)	New	The public sector contracts the private company to design, build, operate, and finance all the project activities for a defined period, except the maintenance of the project and its associated funding needs remain responsibilities of the public sector.
Design-Build-Finance-Operate-Maintain (DBFOM)	New	The public sector contracts a private company to design, build, operate, maintain as well as financing all the projects activities for a defined period. The private sector receives payment for its services from the government.
Concession	Existing	The government grants private company exclusive rights to operate and maintain an existing public facility to provide services to the citizens in accordance with government performance standards. During the concession execution period, the public sector retains ownership over the original asset, while the private company owns any improvements made to the facility. However, at the end of the concession period, the public sector fully owns the facility including all the upgrades.
Build-Own-Operate-Transfer (BOOT)	New	The government grants a franchise to a private partner to finance, design, build and operate a facility for a specific time. Ownership of the facility is transferred back to the public sector at the end of contract period. The private firm receives payment from the service or facility users.
Build Own Operate (BOO)	New	The private sector finances, builds, owns and operates the public facility in perpetuity. The private sector is not only entitled to all the rewards but is also responsible for managing all the project risks.

Developed from Eggers and Startup (2006:5); U.S. Department of Transport (2016:4-5); Sanda, Daniel, Akande and Adeagbo (2016:7); Lammam, MacIntyre and Berechman (2013:8-10)

The private sector has two options of participating in PPPs. Either by using the existing public facilities to provide public service, where it may be mandated to improve the facility too, or to build a new public facility that will be used for the first time when construction is complete. According to Poole, Toohey and Harris (2014:107) PPP forms are the main determinants of PPP project risks allocation and sharing. When the public or private sector organisations take up less or more responsibilities, so are the number of risks they are set to manage. This behavioural trend is illustrated in Figure 3.9 below.

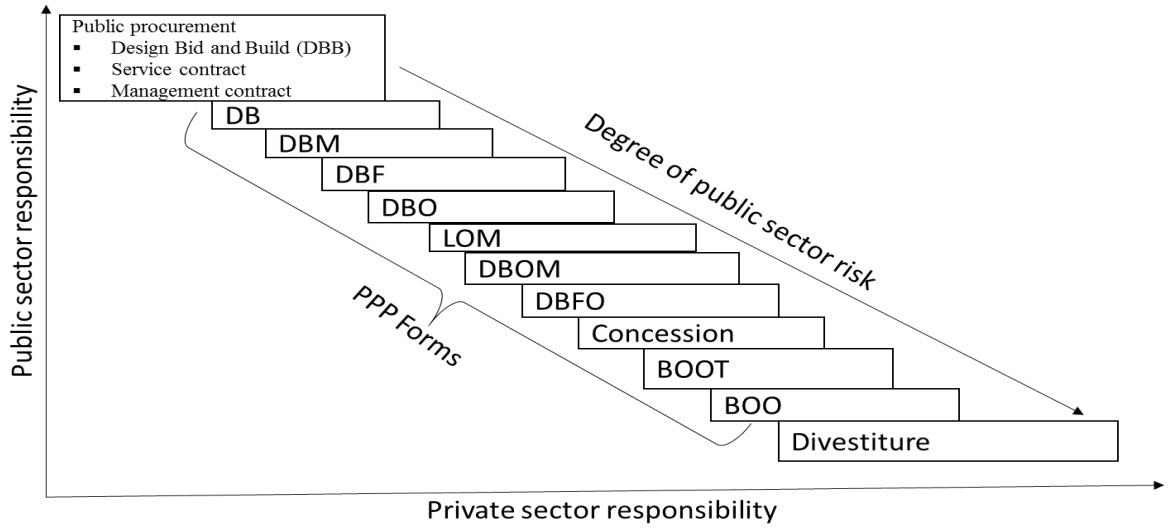


Figure 3.9. Positioning PPP forms in a broader setup of private provisioning of public services

Source: Author

Sloping the grid from the DB to BOO, the private sector responsibilities and risks keep increasing, whereas the public sector's responsibilities and risks are greater as it moves up the grid from BOO to DB, and the reverse is true for both parties. However, whereas public procurement forms of DBB, and service and management contracts on one hand, and divestiture on the other hand involve private sector participation in public service provisioning, principally they are not PPP forms, due to the facts outlined hereafter. With DBB, facility designs are made by public employees with minimal or no private consultant input, a construction firm is only contracted for construction, specifications are input based, and operation, maintenance, and financing of project processes are sole responsibilities of government. For service and management contracts, these are purely outsourcing arrangements. Conversely, with divestiture the public sector transfers ownership of a public facility together with its service provision responsibilities to the private sector through a partial or an outright privatisation sale. However, in all these non-PPP private sector public service provisioning mechanisms, the government should regulate the actions of the private sector to ensure that the appropriate public services continue to be provided. Apart from divestiture, it is noticeable from figure 3.9 above that the public sector transfers greater risks to the private sector through PPP models than through any other contracting arrangements.

b) Renegotiation

Apart from Guasch, Benitez, Portabales, and Flor (2014) whose descriptions are close to a definition, none of the available scholars in the area of PPP renegotiation has taken an interest in providing a definition of renegotiation. In this subsection, we paraphrase Guasch *et al.'s* (2014:4) descriptions to

refer to renegotiations as, negotiation processes which are focused on making changes to the original PPP contract due to significant changes in the current risk matrix assignment and contract conditions, as well as changes in the project scope that were never provided for in the contract. Whereas requesting changes to a PPP contract is an entitlement to all parties, in practice the private sector makes renegotiation requests more often than public entities.

Although there is limited scholarly writing on renegotiation, PPP infrastructure projects are a common setting for contract renegotiations. The frequency of renegotiation occurrences, the ever-increasing investment costs associated with them, and their occurrence shortly after contract signing, not only manifest imprudent risk allocation, poor contract design and implementation, but also an abuse of the good intentions for preventing failure or cancellation of contracts upon which renegotiation processes were conceived (Yong, 2010:22 & 50). Between 2004 and 2006, 33% of PFI projects of the central government in the UK, and 55% of the PPP contracts in the transport sector between 1980 and 2000 in Latin America were renegotiated (Poole *et al.*, 2014:114; Guasch *et al.*, 2014:3). In Hungary, during the construction of a concert hall in Budapest city, the project's investment increased from 175 to 827 Million Euros after renegotiation because the original contract lacked some technical features of the building (Dechev, 2015:233). Similarly, on the D1 motorway in Slovakia the financial commitments of the public sector increased from 7.822 to 9.128 billion Euros (Dechev, 2015:234).

Using the examples of Latin America and the Caribbean, Table 3.10 gives an overview of the likelihood of occurrence and the speed at which renegotiations would take place in each of the infrastructure sectors after contract award.

Table 3.10. Public Private Partnership Renegotiation Trends Across Sectors

Sectors	Percentage of Renegotiated PPP	Average Time to Renegotiation
All Sectors	68%	1.0 years
Electricity	41 %	1.7 years
Transport	78%	0.9 years
Water	87%	0.8 years
Social Sectors	39%	1.2 years
Other Sectors	35%	1 year

Source: Guasch *et al.* (2014:7)

Based on the results in table 3.10 above, on average PPP contracts are renegotiated a year after contract signing, and they occur in about 68 out of 100 PPP projects. Comparing renegotiation incidence across sectors, the most affected sectors are water and transport with about 87% and 78% of their respective

total PPP projects being renegotiated, as well as being the only sectors where renegotiations take place within a time space of less than a year (0.8 and 0.9 years respectively) after contract award.

In a real world situation, renegotiations seem to be spontaneously happening because PPP actors unilaterally focus on realizing their own targets rather than looking at renegotiations as a mechanism for providing improved public services over time. Yong (2010:50) argues that PPP renegotiations occurring worldwide are based on the "opportunistic behaviour of actors to secure extra benefits rather than a lack of completeness in contracts". Consequently, renegotiations are becoming a critical problem to the implementation of PPP projects (Guasch *et al.*, 2014:8). There are many drivers of renegotiations with negative consequences on PPP project success, as listed in table 3.11 below:

Table 3.11. Common causes and Effects of PPP contract renegotiations

Drivers	Improper assignment of risks/responsibilities, weak or non-competitive bidding, lack of transparent contracting environment, inadequate procurement procedures, lack of effective contract monitoring and oversight, hurried PPP processes because of unrealistic government directives and targets, government's motive to conceal project failures from the public, inadequate project scope, unpredictable and non-transparent conflict resolution mechanisms, laws or contracts prohibiting price adjustments amidst unfavourable economic conditions, unpredictable financial distress globally and at a firm level, currency fluctuations, changes in or introduction of new regulations, procurement challenges (bidding errors, aggressive offers, poorly written contracts, failure to make decisions or poor decision making), opportunistic behaviour by operators and governments, government bypassing formal authorisation (by Parliament) to secure additional financing to expand investments, omissions of critical contract aspects, lack of transparency and an ineffective legislation, unclear procedures for contract negotiation and implementation, poor planning and value for money assessments, overlooking traffic demand projections, over-optimistic revenue and population growth forecasts, unwillingness by government to make availability payments, project cost overruns, the long-term nature and incompleteness of PPP contracts
Effects	Contract changes favouring concessionaires at the expense of taxpayers , increased disputes and conflicts, project costs exceeding benefits, adverse fiscal impacts, increases in direct and contingent liabilities, expensive (money and time used) to resolve conflicts, loss of credibility and public support by the government, lower prices accompanied with poor quality services, reduced access and delays in the provision of services, inflated project costs, delayed or extended contract completion, project cancellations, high costs of refinancing, increase in tolls or availability payments, additional public investments

Developed from Marques and Berg (2011: 926-927); Guasch *et al.* (2014:2-12); Dechev (2015:233-235); Perkins (2013:8-15); Poole *et al.* (2014:114)

To ensure effective risk management through renegotiations, Marques and Berg (2011:927), Guasch *et al.* (2014:12-14) and Perkins (2013:15) suggest the use of measures that prohibit opportunistic behaviour, and those that emphasise effective management of renegotiation processes. The prohibitive measures include: having a freeze period for renegotiations (with a few exceptions), affording public entities powers to reject aggressive and reckless bids, PPP laws providing for a "no alteration clause" in the risk matrix during renegotiation, increasing political costs for accepting renegotiation demands, having higher bid and performance requirements, and encouraging competitive bidding (in exceptional cases) when additional investment on a project have been proposed. The measures for effective management of renegotiation processes include: having bidding documents that limit ex-ante and ex-post opportunism behaviour**,** the PPP Unit playing a greater role in regulating contracts**,** establishing regulatory frameworks for ensuring transparent renegotiation processes**,** having a panel of experts to handle renegotiation concerns, having clear jurisdiction over the decision to renegotiate, establishing compensation and conflict resolution guidelines, negotiating for a fixed interest rate for PPP financing, and extending the duration of the contract as adverse economic conditions persist.

Finally, Marques and Berg (2011:927) and Guasch *et al.* (2014:13) propose key principles that should be complied with when handling renegotiation matters, which include: preserving the value for money of the contract, all parties must respect the original contract and each of them must provide an account of contract performance, the outcome of the negotiation should not provide any extra-ordinary benefits to any party, the renegotiation results should not change the risk allocation matrix, renegotiations should never be used as a way of correcting errors (ensure you have the right contract first time), and renegotiations should be restricted to outcomes beyond the PPP parties' control and predictability capacity.

c) Public Private Partnership Guarantees

Literature has provided varied understanding of guarantees. As a result, guarantees have been vaguely defined (Irwin, 2007:1). In this study, guarantees are defined as protective instruments used to assure continuation of contract implementation or service provision amidst tough conditions. Given that guarantees are only performed upon the occurrence of risks covered under them, they are at times referred to as contingent liabilities or secondary obligations to the contract (Aldrete *et al.*, 2010:20; Irwin, 2007:1). Both the private and public sector actors provide guarantees to one another. On the part of the private sector some of the guarantees it provides to the public sector include bid security (which is only refunded upon successful compliance with the bidding terms), and performance bonds (which can be claimed by the public entity only when the private company's performance falls short of contract standards). Although bid security, performance bonds and many other guarantees from the private

sector are critical in enabling effective management of PPP risks, the discussions of this subsection are customised to government guarantees.

With the numerous risks associated with PPP projects, the majority being beyond the direct control of the private sector, PPP projects tend to be less attractive to private sector investors. This problem is further aggravated by the fact that PPP projects require heavy private sector investment, yet revenue from these projects comes in after long periods of frequent investment, and payment is spread over many years. Consequently, the government uses guarantees to make PPP projects commercially viable, and to safeguard private sector interests (Aldrete *et al.*, 2010:19; Irwin, 2007:1). However, failure by the public sector to cautiously allocate and share risks with the private sector, may cause the government to find guarantees very costly to implement. Examples of government guarantees used in PPP projects are described in table 3.12 below.

Table 3.12. Types of Government guarantees

Guarantees	Description
Equity	The concessionaire is granted an option to be bought out by the government with a guaranteed minimum return on equity. The private sector performance incentives are drastically reduced, as government essentially assumes all project risks
Debt	The government provides assurance and commitment to repay the lender (credit provider of the project company) the amount due and guaranteed subject to terms and conditions of the agreement, in case the borrower defaults. The government's exposure to risk increases as the private sector's incentives reduce
Exchange rate	The government compensates the concessionaire for increases in the local cost of debt service or any other payments due to exchange rate movements. The compensations are made where the exchange rate fluctuations exceed a defined limit
Grants and subordinated loans	Governments can furnish grants or subordinated loans as a cash or in-kind contributions. Whereas subordinated bonds are repayable after the project is successful or repaid before returns to equity are made but after senior loans have been paid, grants on the other hand are non-repayable contributions.
Shadow tolls	The government contributes a specific periodic payment per vehicle recorded on the facility/road. The government contribution increases or reduces with an increase or reduction in traffic (facility usage) respectively
Minimum traffic or revenue	The government compensates the concessionaire in cash if traffic or revenue falls below a specified minimum level. The minimum traffic or revenue threshold should be set below the expected level in order to reduce government risk exposure. With these guarantees, governments normally limit the maximum amount of revenue the project developer can retain
Concession extensions	The government can extend the concession term if revenue falls below a minimum amount. The extension terms do not impose any cash neither cost on the government nor provide any short-term protection to investors from traffic and revenue shortfalls
Revenue enhancements	The government may enhance revenues by limiting competition, building complementary facilities to feed traffic to the concession, and allowing for the development of ancillary facilities above or adjacent to the facility. However, such agreements restrict public control over future development, which may be unattractive to the public partner

Developed from Fisher and Babbar (1996: 26-28)

The descriptions of the various guarantees in table 3.12 above indicate that each of the guarantees is suitable in specific conditions, and their impact on the government' s risk exposure and the private sector's incentives to execute its duties, vary across guarantees. In addition, Fisher and Babbar (1996: 29) noted that a combination of guarantees can be used in a single project, as long as they complement one another or the conditions for their use ensue. Figure 3.10 below illustrates how government risk exposure increases or reduces because of providing guarantees that significantly or slightly secure the concessionaire's commercial interest.

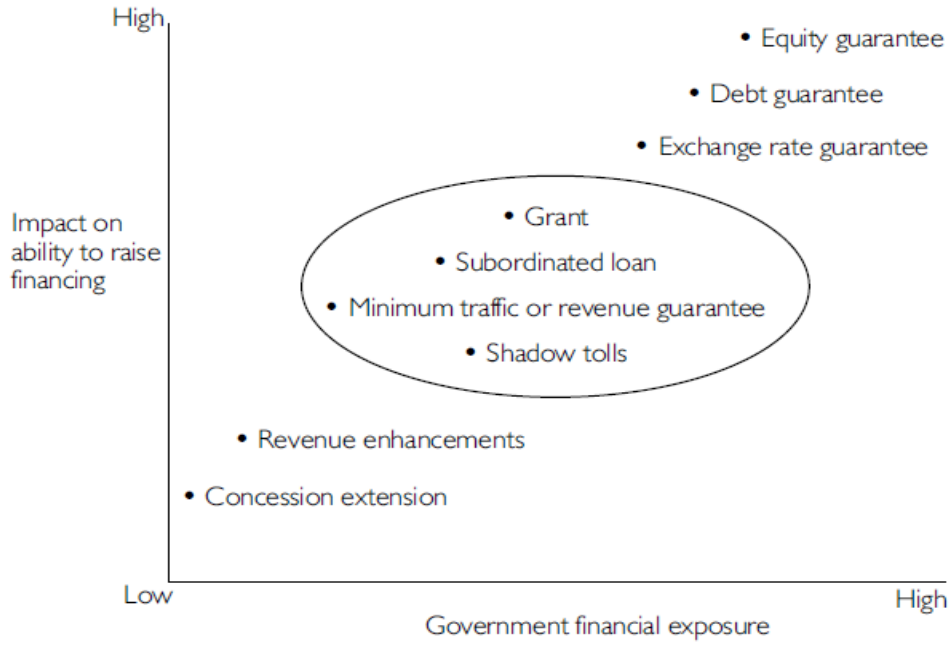


Figure 3.10. Guarantees and their Degree of Risk Exposure to Government

Source: Fisher and Babbar (1996: 28)

The four guarantees in an oval shape in figure 3.10 above are most preferred because they significantly incentivise the concessionaire to perform the contract with less difficulties, and at the same time causes minimal risk impacts to the government. Although guarantees above and those below the oval shape (refer to figure 3.10 above) easily attract private sector participation in PPP projects, they, however, pose long-term sustainability challenges. For instance, because of the high risks associated with equity, debt and foreign exchange guarantees, the government may fail to fulfil its commitments in the future, especially where many projects are being undertaken and such guarantee claims have to be effected on almost every project. As for revenue enhancements, the public sector may fail to undertake critical future investments in some geographical areas and/or make wrong investment decisions by trying to protect private sector interests. Meanwhile, concession extensions delay project completion with their envisioned service impacts, and they are, as such, not the best option when the concessionaire has serious financial challenges that may require quick financial solutions.

Government guarantees other than those cited by Fisher and Babbar (1996) (See table 3.12 above) include: **Political risks guarantees**: The government commits itself to compensate the concessionaire for project risks caused by or within the direct control of the contracting entity or government as a whole (e.g. "currency inconvertibility and/or non-transfer; confiscation, expropriation, nationalization, or deprivation of project assets; political violence, such as strikes or civil disturbances, terrorism, and sabotage that negatively affects the project; and breach of contract, such as non-delivery by state-owned entities of inputs, or non-payment for outputs") (Tsukada, 2009:156). **Tax and land acquisition incentives:** Tax incentives involve exemption from registration tax on land acquisition, exemption of capital equipment from import taxes and duties, exemption or paying a lower rate of value added tax, and exemption from or a reduction in various appropriation charges. Further, with land incentives government may provide land to the private sector or government may use its sovereign powers to assist the private investor expedite the process of land acquisition without unnecessary delays (ESCAP, 2011:48-49).

Key recommendations that have been made in order to improve management of guarantees include:

- Creating a reserve fund to meet guarantee obligations as they fall due (Aldrete, *et al.*, 2010: 22);
- Incorporating guarantees costs/risks in project budgets and in national government budgets for better accountability and resource facilitation (Irwin, 2007:121);
- Charging fees to beneficiaries of guarantees in order to avoid applications for guarantees, especially on trivial matters (Aldrete, *et al.*, 2010: 22). This is already being implemented in India and Korea;
- Sharing of guarantees with concessionaires (e.g. partial credit guarantees) and the citizens (e.g. transferring part of the guarantee costs through taxes or user fee increments) (World Bank, 2013:6);
- Sound advisory teams and approval processes for assuming and honouring guarantee obligations (Irwin, 2007:106);
- Instituting good accounting standards and promoting modern reporting (Irwin, 2007:113-114).

3.3.5.2 Risk Allocation and Risk Management Strategies

The decision for the private sector to participate in the development of public infrastructure and service delivery is conditioned on the effective allocation of PPP project risks (Marques & Berg, 2011:925). The ability of the private sector to satisfy public service needs, while realizing profits, are key issues to consider when making risk transfers. Otherwise, PPP projects may not attract enough competition to enable the contracting of world-class companies. On the other hand, the public sector should not assume risks that it cannot effectively control nor should it transfer to other parties risks to which it is in the

best position to manage. As a principle, risk must be allocated to a party that is most able to manage it (Reim, 2009:7), at the lowest cost possible without compromising quality. For instance, the public sector can best handle most of the legal and political risks, and the private sector is more suitable for handling most of the project design, construction, and operation and maintenance risks (Lammam *et al.*, 2013:13). Lammam *et al.* further suggest risk sharing for those risks (such as most of the force majeure risks) where none of the parties is in a better position to manage them.

Although most PPP literature tend to portray risk allocation and sharing to be between the public and private sector parties on the one hand, and among the public sector actors on the other hand, this same practice is also a reality among private sector actors themselves. Under the special purpose vehicle arrangement, project sponsors redistribute risks allocated to them by the public sector through separate contract agreements with many other private parties. For instance, project liabilities and asset responsibilities, and capital contributions risks are shared by shareholders; design and construction risks are borne by Engineering procurement and construction (EPC) contractors; project materials and equipment provision risks are allocated to supply contractors; operating and maintenance risks are assumed by operating and maintenance contractors; and project debt financing risks are allocated to lenders (Alfen, Kalidindi, Ogunlana, Wang, Abednego, Frank-Jungbecker, Jan, Ke, Liu, Singh & Zhao, 2009:39-40) .

Effective risk allocation in PPP contracts has proven effective to reduce operational financial costs and increase revenue collections, to provide incentives for sound management of PPP projects, and to minimise the number of renegotiation applications (Marques & Berg, 2011:926). However, PPP projects that have regarded risk allocation as inconsequential, have their operations characterised by: making of untimely and wrong decisions, miscommunication, mismanagement of project lifecycle processes, dissatisfaction of facility and service users, adversarial relationships between parties, and discriminative contract documents which protect public sector interests at the expense of interests of other actors (Abednego & Ogunlana, 2006: 632). On the other hand, Abednego and Ogunlana (2006: 629) suggested six principles through which satisfactory risk allocation could be achieved:

- risks must be well identified, understood and evaluated by all parties;
- risks must be allocated to parties with the best capability to control their occurrence;
- parties must have the technical capability to prevent adverse effects on project outcomes even when risks have occurred;
- parties must have the financial ability to sustain the consequences of risks or prevent their occurrences;
- parties must be willing to accept responsibility of risk management; and
- risks must be allocated timely.

Similarly, Burger *et al.* (2009:9-11) provide general strategies for effective management of PPP risks, which include:

- Risk avoidance. Where risky activities are not undertaken (e.g. opting for public procurement);
- Risk prevention. Where an action is taken to reduce vulnerabilities (e.g. a consortium borrows in domestic currency to avoid exchange rate risk);
- Risk transfer. Where risk is transferred to another party through a contractual arrangement (e.g. minimum traffic guarantees);
- Risk retention. Based on experience, risks are allocated to parties with incentives to reduce their negative repercussions (e.g. designs risks for engineers, and policy changes for government);
- Insurance. Where financial cover is made to guard against any loss that may accrue from a negative outcome.

Overall, the effective management of PPP risks requires having and executing a thorough, rigorous and transparent PPP risk management and review process that are shared among the entire PPP project's participating teams (see details in figure 3.11 below).

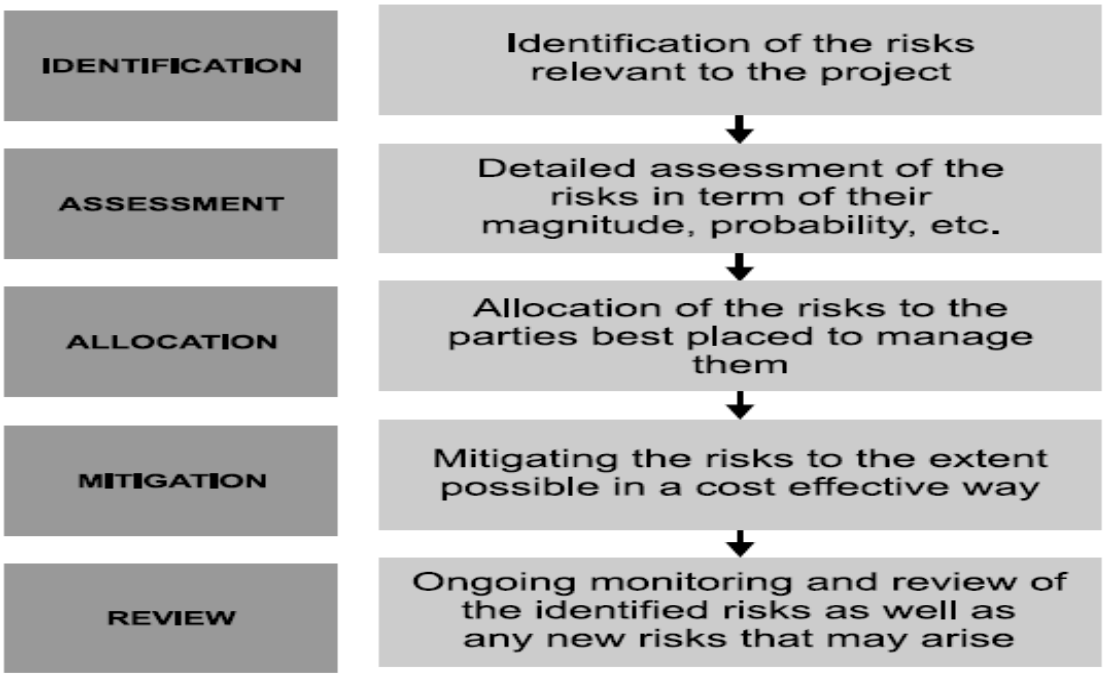


Figure 3.11. Risk Management and Review Process

Source: Yong (2010:18)

From Figure 3.11 above, it is observable that the identification and assessment phases are for establishing the projects' exposure to risks, while the allocation, mitigation and review phases are about managing risks to which the project operations are exposed (Aldrete *et al.*, 2010:16). Risk exposure phases (identification and assessment) assist in developing comprehensive risk lists, and documenting the likelihood or unlikelihood of their occurrence and the magnitude (very high or very low) of their impact on project objectives. While risk exposure management phases assist in developing workable risk management strategies and proposing best ways for their implementation, and providing guidance on how risk performance reviews for the whole project's activities should be carried out and corrective actions taken. Finally, given the long-term nature of PPP contracts, continuous reviews and updates of the risk management direction should be a norm, since variations in the type of risks, and risk occurrences and risk impact levels, are inevitable as the project progresses.

3.4 SUMMARY OF THE CHAPTER

The main intention of this chapter was to provide information on how to create and implement prudent and well organised PPP governance systems and processes that can facilitate effective public service delivery. An effort in understanding PPP governance was undertaken, an analysis of key PPP governance issues was made and appropriate strategies on the effective management of the overall PPP operations were integrated within each of the issues presented in the chapter. The study established and discussed the key elements for effective governance of PPP projects, which included PPP best practices (PPP principles), critical success factors, stakeholder management, risk management, and PPP maturity. The next chapter will evaluate PPP international experiences and practices in the road sub sector.

4 CHAPTER 4: INTERNATIONAL PUBLIC PRIVATE PARTNERSHIP EXPERIENCES AND ROAD SUB SECTOR PRACTICES

4.1 INTRODUCTION

Global experiences and practices are critical in informing the development of public infrastructure in PPP emerging countries. This chapter evaluates the impact of the global financial crisis on PPP investments, the role of road tolls in infrastructure development, and analyses PPP road practices using road cases from four continents. The relevance of this chapter is to enable the Ugandan road sub sector to draw lessons from other countries, particularly concerning the management of PPP financial challenges and road development interventions.

4.2 THE GLOBAL FINANCIAL CRISIS ON PUBLIC PRIVATE PARTNERSHIP INVESTMENT

Financing forms one of the key pillars for PPP investment excellence. However, on the global scene, PPPs have experienced three waves of financial catastrophes - the Asian financial crisis of 1997/1998, the Dotcom bubble of 2000-2002, and the global financial crisis of 2008. In as much as each of the three periods has had undesirable investment results, the Asian financial crisis and the Dotcom bubble have had the most dramatic ramifications on the PPP investment growth across the world. Using consolidated data for projects that had reached financial closure from only the energy, transport, and water and sanitation sectors (PPI-World Bank database, November 2015), figure 4.1 below shows PPP growth trends between the period 1991 and 2015.

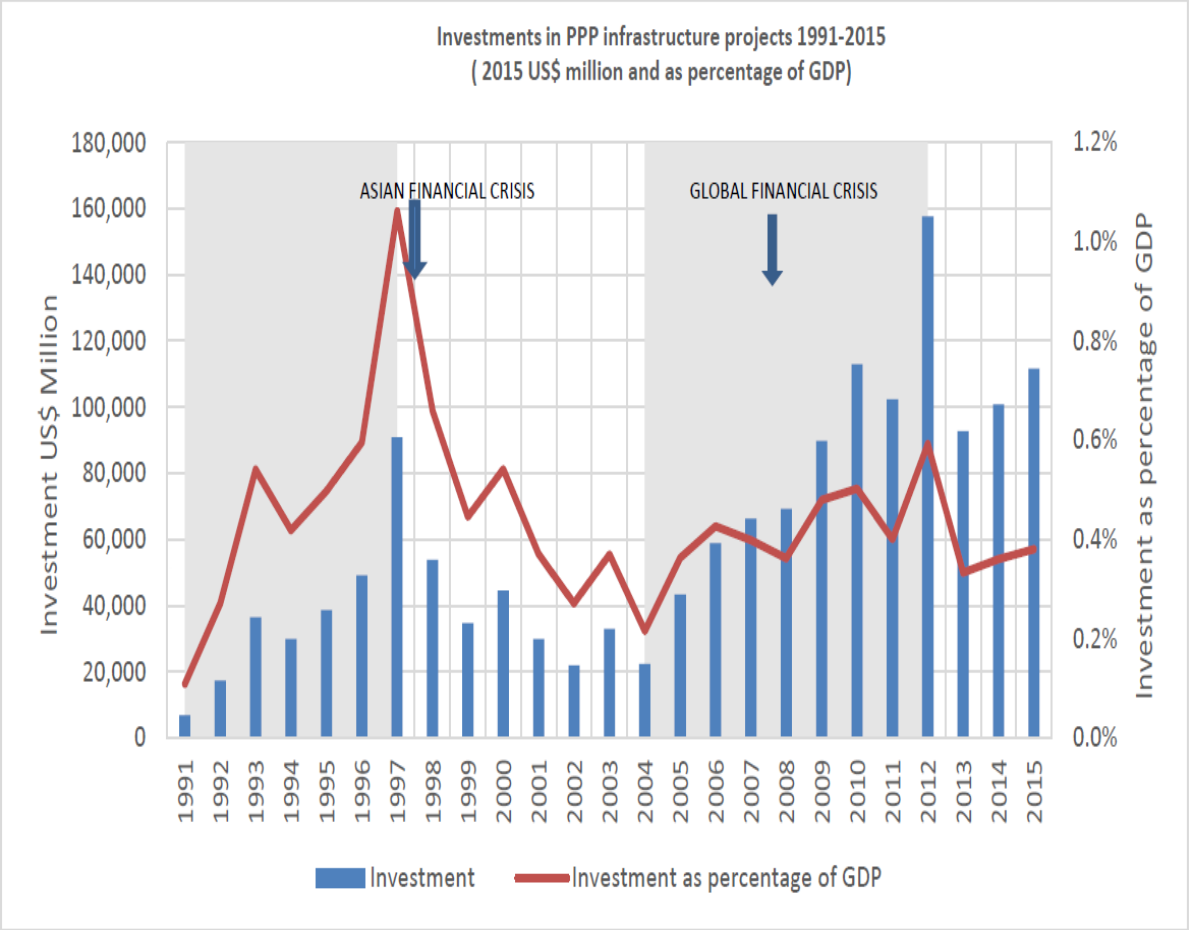


Figure 4.1. Investments in Public Private Partnership Infrastructure Projects, 1991- 2015

Source: World Bank Group (2016:8)

From figure 4.1 above, PPP investment grew steadily from $7 to $91 billion between 1991 and 1997. However, because of the setting in of the Asian financial crisis, which was followed by the Dotcom bubble, by 2002 the PPP investment had fallen to $21.9 billion. Furthermore, although the period 2005-2012 saw a tremendous recovery in PPP investment to a growth value of $158 billion by 2012, unfortunately by 2013 a 40% decline in PPP investment had been registered. Such drop in PPP investment can be explained by the many and expensive interventions that governments were taking to avert the effects of the 2008 financial crisis, which automatically reduced direct funding for PPP projects (as explained in the subsequent subsections below).

This subsection has provided an overview of how global financial crises tilt the trend of PPP investment, in context of the Asian, the Dotcom bubble and the 2008 financial crises. Unlike other global financial crises, the 2008 global financial crisis sets a new and unique trend, where PPP investment grows steadily amidst stiff global financial challenges. The next subsection (4.2.1) presents a discussion on the impact of the 2008 global financial crisis on PPP projects.

4.2.1 The Impact of the 2008 Global Financial Crisis on Public Private Partnerships

Prior to the 2008 global financial crisis, PPPs relied on debt financing from banks and bond financing (from Project companies) that was insured through monoline "wrapped" bonds (Loxley, 2012:8). The bank loans was medium term financing running between 15-20 years, which had to be subjected to project refinancing later, while bond financing was long-term in nature and spanned over 30 years and above (Loxley, 2012:9). Although these two financing mechanisms had revived PPP investment, they were later suffocated by the collapse of the monoline insurance "wrapped" bond markets and the decline of the housing market due to subprime mortgage investments in the USA in 2007, and the bankruptcy of the Lehman Brothers (the 4th largest US Investment Bank then) in 2008 (Connolly & Wall, 2011:535), which sparked the 2008 global financial crisis.

The aftermath of the global financial crisis (GFC) saw governments experience reductions in revenue collections, foreign and domestic financing, and high unemployment coupled with a drastic drop in individual incomes, because the private sector's capacity to sustain PPP investment was hanging in the balance. During this time many banking, pension fund and insurance institutions either pulled out or ran out of business, and a few that remained in operation have since then redesigned and tightened their financing incentives for investors. Consequently, the global financial crisis of 2008 exposed the public and private sectors to greater vulnerabilities, which until today continue to haunt PPP investments, as highlighted in table 4.1 below.

Table 4.1. Global Financial Crisis Threats, Vulnerabilities and Their Effects on Public Private Partnerships

Risk threat and vulnerability			Risk realization	
Threat		**Vulnerability**	**Effect on private partners**	**Effect on the government**
Financial	Interest rates hike	Large borrowing or refinancing need; variable interest rates	Higher debt service=increasing costs; liquidity problems; questionable feasibility of some projects given lower returns	Timing of investments (postponing); trade-off between PPPs and traditional concessions altered. Possible cash flow support to corporates
	Unavailability of credit	Underfinanced project or new project	Lowered capacity to refinance; shorter loans; shift to bonds and equity vs. bank loans	Termination of existing projects, failure to achieve financial close of new projects; capital injections
		Revenues from the project and/or assets securitized; securities indexed, and insured	Losses from downgrade of bonds; lowered capacity to refinance given lack of insurers; shorter loans and shift to bonds and equity vs. bank loans.	Reduced investment for new and existing PPPs and recapitalization costs
Real	Exchange rate depreciation	Sizable external debt, currency mismatches, dollarization	Corporate balance sheets if borrowing externally. Counterbalancing: increase in demand if service is export oriented (including highway). Higher input costs if inputs are imported.	Increased external debt service (financing constraints) and lower attractiveness for new investments relying on external borrowing; private sector defaults if widespread dollarization; call of guarantees. Counterbalancing force: switch from foreign consumption to domestic investment
	Slump in domestic demand	Commercial projects depending on user fees and explicit contractual guarantees	Corporate balance sheets and pricing of credit by financial partners; liquidity problem; contractor failure and pressure to renegotiate.	Lower domestic revenue (financing constraints) leading to lower investment affecting new and old PPPs; commercial projects risk; call of guarantees due to decline in fees/tolls; pressure to bail out failing contractors and renegotiate

Source: Burger *et al.* (2009:10)

Burger *et al.* (2009:8) attribute the PPP vulnerabilities, and public and private sector negative consequences during the GFC, to weaknesses in the project and contract structures, and institutional frameworks. These weaknesses included, among others, lack of hedging mechanisms (such as guarantees), lack of capacity to take appropriate action upon the occurrence of "guaranteed" risks, and the over optimistic forecasts (such as revenue and traffic).

This study now takes a close look at country specific GFC impacts. In the United Kingdom, between 2008 and 2009 the number of PPP projects dropped from over 60 (valued at £8.4 billion) to 25 (valued at £1.6 billion) (Loxley, 2012:10). This was not only a drastic fall in the volume of projects but also in

the PPP financial investment capacity. In Ireland, "six social housing PPPs were cancelled, a planned prison project was postponed indefinitely, and a metro Project was deferred" (Greve & Hodge, 2013: 39). In addition, from the evidence provided in table 4.2 below, PPPs in Korea, South Africa and Canada were more or less affected in a similar way by the global financial crisis.

Table 4.2. Effects of the Global Financial Crisis on Canada, Korea and South Africa's Public Private Partnership

<table>
<tr>
<td>Canada

➢ Difficult to secure long-term and foreign financing as foreign banks withdrew from the domestic market
➢ Lenders were no longer willing to take up project and refinancing risks because the Canadian dollar was beginning to be unstable
➢ Formerly approved PPP projects were now being implemented under the public procurement option
➢ Difficulty reaching final agreements because of risk sharing challenges during negotiation
➢ Lack of capacity by credit market to handle large projects that were over $500 million</td>
<td rowspan="2">Korea

➢ In 2009, a 10% reduction in annual port traffic was registered
➢ Reduced profitability for PPP projects at operation stage
➢ Delay to implement projects because of lack of funding and prolonged negotiations as parties are hesitate to assume risks
➢ By 2008, 30 % of the planned PPP projects were never implemented
➢ Increased speculations of a further decline in future private investment
➢ Increased interest rates and reduced accessibility to project financing</td>
</tr>
<tr>
<td>South Africa

➢ Reduced profitability and returns on equity
➢ Increased risk aversion of government
➢ lower access to financing
➢ lower demand for facilities with a usage charge
➢ Reduction in PPP investment</td>
</tr>
</table>

Modified from Burger *et al.* (2009:16)

Amidst such stiff economic challenges, governments were expected to come up with measures for bailing out and supporting private sector financial recovery, protecting citizens against declining incomes (Burger *et al.*, 2009:3), as well as ensuring that PPP projects continue to be executed successfully against all odds.

4.2.2 Responses and Recommended Measures to Minimize the Impact of the Global Financial Crisis on Public Private Partnership Performance

Several measures have been suggested and others implemented as strategies for ensuring that PPPs continue to excel during turbulent financial times. This subsection first presents measures that have been recommended by scholars, and later provides specific measures that some countries have implemented to contain the negative effects of the GFC crisis.

4.2.2.1 Recommended measures for minimising the negative impact of the global financial crisis on PPP projects

In response to the GFC effects on European PPP projects, the EPEC (2009:16) recommended the use of up-front and forward government payments, and an increase in multilateral lending. Up-front and forward payments are common with availability and revenue- based projects, where up-front payments are used in favour of the private sector when the private sector is more financially constrained than the public sector, and the reverse is true for forward payments. Turning to multilateral lending, multilateral institutions can either provide third party guarantees (such as letters of credit) or directly fund PPP projects. A practical example is the European Investment Bank, which introduced a "€1 billion Loan guarantee instrument for Trans-European Transport Network projects in 2008, and also temporarily expanded its lending capacity by 40% (€106 billion) between 2009 and 2010 in order to address GFC problem in Europe" (Loxley, 2012:13).

Burger *et al.* (2009:8-21) suggested generic, but comprehensive, measures for reducing PPP vulnerabilities prior to and during financial crises, as pointed out below:

- Robust public investment planning based on project prioritization, future financial implications, and benchmarking with international experiences;
- Adequate distribution of risks between the government and the private sector;
- Sound and detailed legal frameworks, which can provide assurance to the private sector that contracts will be honoured by the public sector;
- Regulations limiting aggregate government risk exposure, which should be consistent with existing fiscal frameworks;
- Building the capacity of public entities to manage risks, and improve their reputation by minimising political and regulatory risks;
- Financial transparency through comprehensive disclosure of PPP related risks and liabilities in fiscal accounts to mitigate against bypassing expenditure controls or to avoid securing private financing against expensive contractual obligations;
- Providing step-in rights to government to either re-tender the project or take over project operation in case of contractor failure;
- Contingent or "strip switch" measures. These are temporary measures subject to withdrawal the moment the economy or the private sector recover from the shock. Such measures may include debt-equity switch, government financing, interest rate and output based subsidies, and revenue enhancements.

4.2.2.2 Country specific responses in protecting PPP projects from the impacts of the global financial crisis

In tandem with scholarly recommendations above, at the height of the GFC, governments across the globe took specific interventions to boost PPP attractiveness in their countries. Although all countries responded in one way or the other to the GFC, this subsection only focusses on interventions that have been taken by UK, Canada, Korea, and Ireland, as presented below.

4.2.2.2.1 The United Kingdom

In 2009, the UK government established the Treasury Infrastructure Funding Unit (TIFU), whose sole purpose was to execute the co-lending strategy in order to tackle the banking liquidity problem that PPP projects and private sector actors in particular were experiencing (Svigelj & Hrovatin, 2013:84; Jennett, 2010:3). TIFU is a government funding facility within the HM Treasury, which lends directly to PPP projects when the private sector cannot secure enough funding from commercial banks to complete projects on time. Although TIFU lends on "exactly same terms as commercial banks", it never competes with private sector funders for borrowers, because it "acts as a lender of last resort" (EPEC, 2009:19; Loxley, 2012:13). The financing role played by TIFU has restored private sector confidence, and has also enabled more PFI projects to be completed on time. For instance, in 2009 TIFU extended a £ 120 loan assistance to the Manchester Waste PFI project, and in 2010 alone, 32 PFI deals valued at £4.6 billion reached closure (Loxley, 2012:13).

4.2.2.2.2 Canada

The PPP Canada Corporation was established in 2008 with a PPP fund of $1.2 billion to develop private market and supplement private sector financing (Burger *et al.*, 2009:18). The PPP fund provides loans and loan guarantees, and offers non-repayable and repayable financial contributions (Loxley, 2012:14; Svigelj & Hrovatin, 2013:85). Other Government funding facilities that were started because of the GFC by which PPP projects benefited include the $8 billion Building Canada Fund, and the $2.1 billion Gateway and Border Crossing Fund (Loxley, 2012:14).

Furthermore, the government of Canada got committed to ensuring that provinces and municipals develop their own PPP markets, institutions and programs. For instance, the City of Ottawa established a PPP office, while Alberta province's 2008 budget set aside $6 million as alternative financing for capital projects (Burger *et al.*, 2009:18). In British Columbia, "milestone payments, co-financing, funding competitions, short-term financing, foreign exchange risk protections, and sharing of co-financing risks for some projects were introduced". In addition, rather than the common 90% debt and 10% equity contribution, with the "Fort St. John Hospital and Residential care and Royal Jubilee

Hospital projects, equity contribution was increased to 20% for contractors" *(*Loxley, 2012:14). On the other hand, in Ontario province, procurement procedures were strengthened. For example, "a two-stage bidding method was introduced, where the financial proposals are submitted and evaluated before technical proposals. In addition, the bidders are required to provide evidence relating to stability of their financial proposals, and to confirm their ability to reach financial closure regardless of future credit market disruptions by providing required securities" (Loxley, 2012:14-15).

4.2.2.2.3 Korea

According to Burger *et al.* (2009:18) and Svigelj and Hrovatin (2013:85), the government of Korea introduced fiscal interventions in order to minimise the financial burden on PPP projects during the GFC. These government interventions include:

- Lower equity capital requirements on concessionaires (5-10%);
- A higher ceiling on guarantees (50%) is provided by the Infrastructure Credit Guarantee Fund, specifically for large-scale projects;
- Help in changing equity investors for some projects;
- Compensation for the preparation of proposals to encourage more vigorous competition during bidding;
- Sharing of interest rate risks with concessionaires;
- Compensation for excess changes in base interest rates through the grading of risks at the time of the concession agreement; and
- Shorter periods for readjusting benchmark bond yields.

4.2.2.2.4 Ireland

Prior to the GFC, PPP road projects were based on revenue based contracts, which required road users to pay toll fees. After the GFC explosion of 2008, the government made a change in policy. Currently, all the new roads being constructed in Ireland are contracted on availability-based schemes rather than the previous tolled systems (Reeves & Palcic, 2017:11). This implies that demand risks are now being shared between government and private actors, unlike the tolled road systems which almost transferred all the demand and traffic risks to the private sector. As a safe guard measure though, the government should pay a fixed fee per unit on condition that the private entity complies with the performance and availability requirements (Reeves & Palcic, 2017:12).

Although the focus of discussion has been limited to four countries, similar measures have been applied elsewhere. For instance, like Canada and UK, government PPP Fund facilities are also active in the

USA, and the availability-based contracts for road PPP projects being used by Ireland have also taken root in Spain, Portugal and the USA.

In summary, this section uses the GFC as a case study to generally indicate how financial risks and their impacts can be mitigated to ensure sustainable PPP improvements. Whereas the public sector seems to absorb most of the consequences to the crises, it is noted that the private sector is capable of providing guarantees as well. As governments take a lead role in addressing crises challenges, they should never give leeway to imperfect market actors to play games against public interests (Greve & Hodge, 2013:217). In conclusion, no matter the type of crisis (whether financial, political, social etc.) PPP projects challenges are responded to in different ways. Common measures that have been taken include abandoning projects, rebranding and redesigning projects, making marginal changes to existing projects, tightening value for money analysis and decision making processes, maintaining the status quo, actors taking up new responsibilities, and sharing of responsibilities through partnership arrangement (Greve & Hodge, 2013: 218-219).

4.3 TOLLING FOR ROAD INFRASTRUCTRE DEVELOPMENT

With the prevailing revenue gaps for public infrastructure development, governments across the world can no longer only rely on excise duty fuel charges to meet road infrastructure development needs. Several supplementary financing mechanisms such as tolling, motor vehicle licencing and inspections, and ancillary revenues among others have been introduced. Tolling, in particular is not only being used as a way of recouping the costs of road construction, operation and maintenance but also as an effective means of managing road usage. Whereas Mbara, Nyarirangwe and Mukwashi (2010:152-157) affirm that tolling reduces traffic jams on previously congested routes, improves road safety and efficiency, and generates revenue for road infrastructure financing, they, on the other hand, acknowledge the presence of challenges which may override its benefits, in case decision making processes lack precision. Such challenges include: poor forecasting of initial traffic and revenue performances, payment defaults, debt restructuring, delays to maintain and upgrade roads, opposition from special interest groups, and it is also noted that countries without a history of road tolls often do not afford investing in PPP toll roads and the public is usually disinclined to pay for road usage (Mbara *et al.*, 2010:156-158).

In this thesis, we refer to road tolling as the process of assessing and charging fees on vehicles passing on designated roadways depending on either or a combination of the distance travelled (kilometres), the vehicle category and the transport function each serves, road section used, time duration taken (hours), and time of the day or the day of the week when the road is used. Toll fees may be executed through manual systems where payments are made on the spot (except for shadow tolls where payment is made at a later time) to the toll collector at a toll gate (toll booth or plaza), or using electronic systems that

automatically detect and classify vehicles for billing purposes through long range global satellite navigation, and short range microwave and mobile communication technologies (Kelleher, 2014:73-74; Kapsch TrafficCom IVHS Inc, 2013:7). According to Tsukada (2009:158), where a toll road is a general user facility, a combination of manual and electronic tolling systems should be used to serve the differing paying interests of the various categories of users. Globally, the majority of the countries use the BOT road tolling model, apart from a few countries such as the United Kingdom which apply the DBFO model, but with less or without the application of BOT at all.

This subsection, at a glance, justifies the importance of tolling for road infrastructure development, defines the tolling concept in context of roads, and briefly describes how tolling is applied from a generalised point of view. In the next subsections, tolling is being discussed in relation to financing, demand management and global practices.

4.3.1 Tolling as an Instrument for Road Infrastructure Financing

In most PPP project collaborations, payment to the private sector contractor is not effected before, during and immediately after construction, but during the operation and maintenance of the road facility. The two commonly used financing mechanisms in meeting the payment demands of the private sector are based on user pay principle and shadow tolls. The user pay principle is at times referred to as "real tolls" (Brown, Pieplow, Driskell, Gaj, Garvin, Holbombe, Saunders, Seiders Jr & Smith, 2009:19) or "hard tolls" (Burke & Demirag, 2015:193), and these are road fees that are paid directly by the road users themselves. On the other hand, the shadow tolls are fees either paid fully or subsidised by the government based on the demand or number of users. In the UK, for example, traffic volume based payments depend on per kilometre travelled per vehicle in line with the toll fees structure, which keeps changing over time in accordance with the set index formula. In fact, as traffic bands/volumes increase, lower payments are made by government (and the reverse is true), but no additional returns are offered to the concessionaire beyond the maximum traffic revenue generated, unless the contract stipulates otherwise.

Although most literature generalises shadow tolls charges to be solely determined by the traffic volumes on the road facility (Perkins, 2013:15; OECD, 2008:199), countries such as the UK, Portugal and Spain link shadow toll fees not only to traffic volume, but also to performance and availability payments (Brown *et al.*, 2009:19). Availability and performance payments are "fixed unitary payments" by government to the private company as long as performance and availability requirements, as delineated in the contract, have been adhered to irrespective of demand (Dochia & Parker, 2009:3; Burke & Demirag, 2015:193). Whereas availability payments depend on the lane availability, asset safety features, road surface quality, vehicle class, and vehicle journey time reliability, performance payments

are based on timely maintenance works, adequate safety and traffic flow control measures, and proactive response to accidents and weather vagaries (Perkins, 2013:15; Burke & Demirag, 2015:193).

The revenues from hard tolls are supposed to be sufficient to meet the private sector's payment needs, together with road operation and maintenance service needs, with little or without the taxpayer's financial contribution. The minimum revenue to be claimed by the private company is predetermined and any revenue collected above the minimum level has to be shared between the public and private sector organisations. However, where the revenue collected is below the projected minimum level, the government either increases user toll fees, lobbies for grants or provides subsidies (Burke & Demirag, 2015:193). Taking a general perspective of tolls, whereas Rothballer and Kim (2013:32) argue that the majority of the citizens and politicians hate tolls especially for "previously free infrastructure", on the contrary Engel, Fischer and Galetovic (2009:21) state that road users are willing to pay tolls when new and quality roads are constructed or existing roads have been "substantially upgraded and improved". For instance, the toll revenue on the Indiana toll road in the USA doubled after being upgraded and constructed as a PPP in 2006 compared to its previous performance under direct State management and ownership (Engel *et al.*, 2009:21).

In addition, something that is emerging, though not a universal condition for toll revenue generation, but worth highlighting in this subsection, are ancillary revenues. As is the practice on most of India's expressways, ancillary revenues not only act as viability enhancement schemes for PPP projects to the private sector, but also an innovative mechanism of supplementing revenues from road tolls for government (Asian Development Bank, 2015:22). According to Brown *et al.* (2009:19) ancillary revenue mechanisms are commercial developments and land use arrangements along the roadways that provide extra funding for road development. Rothballer and Kim (2013:32) identified three ways through which ancillary revenues can be generated. The first one being the continuous receipt of funding from businesses such as retail outlets, advertising, accommodation, cross-selling, renting out space for fibre-optic cables along the highway, service stations, restaurants, and utility corridors. The second one is the buying of land before publicly announcing a PPP project, and later selling it at incremental prices or leasing it to real estate developers as project activities commence. The last one is where government subjects an added annual property tax levy to all the land within a certain distance of the enhanced or developed facility.

Finally, Tsukada (2009:158) and Rothballer and Kim (2013:32) suggest key strategies for designing an effective toll fees structure and enforcement process to include:

- Ensuring that newly constructed or upgraded facilities improve the quality of service, and the value added therefrom is appropriately communicated to the citizens;

- Instituting differentiated toll rates by adjusting charges according to time, location, usage, and vehicle category;
- Using payment mechanisms that maximize productivity, but remain accessible to all users. For instance, as e-tolls are introduced, manual payment systems should continue to be used in order to meet the interests of the poor and those that are less adaptable to electronic systems;
- Implementing effective payment procedures by having relevant legislation, competent and professional enforcement teams, and taking necessary precautions to detect illegal usage;
- Mitigating the adverse social consequences of user charges by providing alternative infrastructure facilities, and subsidies or reduced tariffs for vulnerable parties and groups at risk;
- Concession agreements should provide for potential inflation by linking the level of tolls to either consumer price index or wholesale price index.

This subsection provided an understanding of the various ways through which tolling supports the financing of road infrastructure development. In addition to the direct toll revenue payment approaches (i.e. real tolls, shadow tolls, and availability and performance payments), an indirect revenue generation approach of ancillary revenues which boosts revenues from toll roads has been discussed. Finally, strategies on how toll revenue contributions can be improved have been suggested. In the next subsection, the management of demand for toll roads is presented.

4.3.2 Tolling as an Instrument for Transport Demand Management

Although road user tolls provide financing for accelerating and fast-tracking road infrastructure development, they are, however, capable of diverting traffic volume to toll free parallel roads, which are usually of inferior quality, low speed, less safe and located in areas that are more sensitive to air and noise pollution (Kelleher, 2014:86; Rothballer & Kim, 2013:32). Other factors notwithstanding, the low appetite for toll roads is normally caused by the enforcement of prohibitive road user charges. For instance, “around 2005 the majority of the road users in Japan avoided travelling on toll roads because the standard toll rates had been increased to 150 Japanese Yen (JPY) plus 24.6 JPY per kilometre for passenger vehicles, and while the charge for large vehicles almost doubled, a situation that led to congestion, safety and environmental problems on non-tolled routes” (OECD, 2008:146). A similar example can be drawn from Zimbabwe, where the residents of Bulawayo sued and won a court case against government over a tollgate located on the 13.5 km peg on the Bulawayo Victoria Falls road, on the grounds that they were never consulted over the introduction of toll fees in addition to lack of alternative routes, which forced them to pay daily toll fees as they travelled to the city of Bulawayo for household shopping, social interactions, business and work purposes (Mbara *et al.*, 2010:165-166).

Furthermore, according to an empirical study carried out on 14 Australian toll roads by "Li and Hensher in 2010", it was discovered that, on average traffic volumes fall short by 45% against projections in the first year of operation (Perkins, 2013:22). Relatedly, although Chung (2008:390) is cognizant of the fact that transport demand is difficult for any party to forecast and control, he maintains that the government has an upper hand over the private sector in managing traffic flow on toll roads, since it largely has control over town planning decisions which have a correlation with traffic volumes on most road networks, the provision of competing toll-free roads or suppression of competing services, and land use in areas feeding into toll roads.

Summarily, in view of the above reviews, the problems of transport demand for toll roads emanate from poor risk identification, lack of transparency, and improper risk uncertainty rating and management. Table 4.3 below provides the rating continuum (more risk vs less risk) for the various risk factors that affect traffic volume on toll roads.

Table 4.3 Demand Risk Characterisation for Toll Roads

	Less Risk	More Risk
Charging Regime	Availability payments	User tolls
	Tolls well established, data on actual use established	Toll roads absent or unusual
	Toll rates in line with tolls on existing facilities	Tolls higher than norm
	Simple toll structure	Complex structure (local discounts, frequent users, variable pricing)
	Flexible toll rate- revision without government approval	All tariff rises require regulatory approval
Forecast horizon	Near term	Long term- 30 years plus
Infrastructure	Facility already open	Early planning stage
	Extension of existing road	Greenfield development
	Estuarine crossings	Dense road networks
	Radial corridors in urban area	Ring roads, beltways
	Highly trafficked corridor	Absence of congestion
	Good, high capacity connectors	Congested links to network
	Standalone facility	Dependent on connections to other proposed improvements
Route	No competing alternative route	Many alternative roads
	Competition protection e.g. truck bans on alternative routes	Local authorities free to change rules
	Alignment with clear rational	Confused road objectives (not where people want to go)
	Alignment with strong economic rationale	Alignment with political rationale
	Clear plan for future network extension	Many options open for future network extensions
	No competition from other modes	Competition on route from air, rail or ferries.
Users	Few key origins and destinations	Multiple origins and destinations
	Clear market segments	Unclear market segments
	Dominated by single purpose journeys (commuting, airport...)	Multiple journey purposes
	High income, time sensitive market	Average/ low income market
	Flat demand profile	Highly seasonal or peaky demand
Commercial users	Fleet operators pay toll	Owner/ drivers pay toll
	Clear operating cost/ time savings	Unclear competitive advantage
	Simple route choice decisions	Complicated decision making
	Strong compliance with weight limits	Overloading common
Data	Legal basis for collection	Difficult/ dangerous to collect
	Experienced surveyors	No culture of data collection
	Locally calibrated parameters	Parameters transferred from elsewhere
	Zoning framework established	Zoning framework to develop from scratch
Macroeconomics	Strong, stable, diversified local economy	Weak/transitional local or national economy
	Strict land-use planning	Weak planning controls
	Stable, predictable population growth	Population growth dependent on many exogenous factors
Traffic growth	Driven by established and predictable factors	Reliance on future factors, new land use developments or structural changes
	High car ownership	Low car ownership

Source: Perkins (2013:16-17)

The traffic risk indexing in table 4.3 above indicates that effective demand on toll roads can be realized when demand related risks have been well identified, understood, analysed, assessed and managed. Furthermore, as Rothballer and Kim (2013:29) noted, demand risk management for toll roads should be emphasised at project scoping (especially for tolled corridors), and at contracting and contract

implementation (especially during risk allocation and sharing). Relatedly, OECD (2008:146) singles out the implementation of a flexible toll fee charging scheme as one of the best ways towards improving the demand for toll roads.

Taking the phenomenon of a flexible toll charging scheme a little further, from the experiments that were carried out on a flexible tolling system in Japan in 2003, it was observed that discounting toll fees increases traffic volumes on toll roads. From the experiments' results, "a 50% toll discount increased traffic volume to about 195% on weekends and national holidays in Aganogawa City, while a toll discount of approximately 50% in Hitachi City caused about 170% increase in traffic volumes during weekdays. Consequently, the length of queues on non-tolled roads decreased by almost half of the original length" (OECD, 2008:146). Literature further indicates that, globally, frequent users of tolled roads are often offered discounts over occasional users, a move that further improves usage of toll roads. Evidence to elucidate this assertion is as follows: Before the European Commission issued a 13% discount cap in 2006 for European countries, frequent road users could qualify for up to 50% discount in Spain and 30% in France. Furthermore, in Portugal, local residents living within close proximity of the tolled sections of the roads were "allowed 10 free trips" and a 15% discount on subsequent travels (Ricardo-AEA, 2014:43-44). Similarly, on the African continent, particularly within the Republic of South Africa, local residents who live near tolled road sections without alternative travel options are entitled to reductions in highway user charges (Rothballer & Kim, 2013:32).

This subsection has discussed how demand for toll roads fluctuates depending on how perceived tolling risks have been managed. From the presentation provided, it is clear that most, if not all, demand related problems accrue from road user payment fees. Therefore, effective demand risk indexing, providing quality road facilities and services, charging tolls on previously free roads only after substantial upgrades, consultation and involvement of the public when tolling road sections and introducing toll fees, transparency in all toll transactions, provision of alternative routes and modes of transport, and having a flexible toll charging scheme have been identified as sound solutions to low traffic volumes and the unpopularity of toll roads to the public. The next subsection presents country specific road tolling practices.

4.3.3 Global Road Tolling Practices

Whereas before the early 1990s tolling was mainly limited to non PPP constructed roads, today tolling of PPP roads has become an almost obvious practice across the globe. While it is appreciated that tolling can be applied to both PPP and non-PPP roads, in this subsection the discussion is angled towards PPP toll roads. Globally, countries have had varying PPP tolling histories in the road sub sector. This subsection draws lessons from PPP road tolling experiences of countries from different continents. That

is, the UK and Portugal for Europe, South Africa for Africa, India for Asia, and the USA for North America (as depicted below).

4.3.3.1 South Africa's Public Private Partnership Road Tolling Practices

South Africa has approximately 19704 kilometres of national road network, out of which 3120 kilometres (kms) are toll roads (SANRAL Annual Report, 2016:27; Tolmie, 2014:2). The South African National Roads Agency Ltd (SANRAL) manages and funds 1832 kms of the toll roads through capital and money markets loans, direct foreign investments, and issuing of government guaranteed and non-guaranteed bonds. By contrast, the remaining 1288 kilometres of the toll road network is funded and managed by the private sector through special purpose vehicle PPP arrangements. Any proposed toll road project in South Africa is assumed to be viable if: it can generate more than 15% economic rate of return per annum after toll-related capital and maintenance costs have been paid; if its expected toll revenue collections can offset at least 30% of the outstanding projects' costs in the form of capital market loans; and if the cost of toll collection over the project life cycle is reasonable (Pienaar, 2012:702).

The country mainly uses the BOT PPP model for toll roads, but at times with a few variants (e.g. DBFOM), and the maximum PPP contract duration is normally 30 years (SANRAL Declaration of Intent 2005-2008:17). For all the PPP toll roads, SANRAL over time engages only three government contracted private company partners to collect and use funds from tolls to design, construct, finance, operate and maintain toll roads as per SANRAL's standards. These private companies are the N3 Toll Concession (RF) Proprietary Limited (N3TC), the N1-N4 Bakwena Platinum Corridor Concessionaire (Bakwena) and the N4 Trans African Concessions (TRAC). The road toll revenue contributions are only based on the "user pay principle", and toll roads are supposed to have alternative routes (SANRAL Declaration of Intent 2005-2008:17; Tolmie, 2014:2), though the alternative routes need not be of the same standard as toll roads (Persad, Walton & Wilke, 2005:39). Standard toll tariffs differ in relation to vehicle classification, the toll road section, and the toll collection system. In addition, on the Gauteng e-roads, toll discounts are provided throughout the week, except during weekdays between 06:00-10:00hrs and 14:00-18:00hrs for class A1 and A2 vehicles, and between 06:00-8:30hrs and 16:00-19:00hrs for class B and C vehicles when no discounts are permitted. Generally, toll discounts vary based on the time of the day, the day of the week, public holiday, and the vehicle class. However, toll discounts are only awarded on condition that toll payment obligations have been made within the provided grace period. Furthermore, SANRAL account holders using the Gauteng e-roads are entitled to certain monthly caps per vehicle (which varies depending on the vehicle class) only when the toll transactions have been paid within 30 days of the invoice date (SANRAL adjusted toll tariffs schedule 2017).

Toll fees are collected through three systems of traditional, electronic, and open road tolling collection systems (Republic of South Africa, A users Guide to Tolling). Unlike before the automation of tolling systems, road users are now able to use a single registered e-tag account and e-tag to effect payment at any toll plaza across the country. Whereas a congestion charge zone is operational in a few cities and urban areas (Matsiliza, 2016:5), intelligent transport systems which provide real-time information on the flow of traffic through online platforms are being used in the provinces of Western Cape, Gauteng and KwaZulu-Natal, not only to reduce congestion and its associated fees, but also to improve incident management and safety on toll roads (SANRAL Annual Report, 2016:25).

By law, SANRAL is mandated to regulate tolling and also to adjust toll tariffs annually based on the consumer price index. In addition to having issued new toll rates in 2016, SANRAL also provided toll exemptions to: vehicles providing public transport services, vehicles providing emergency services, vehicles adapted for use by persons with disabilities, and vehicles for specific non-governmental organisations or non-profit organisations on the Gauteng Freeway Improvement Project on the e-toll roads at N1 sections 20 and 21, N3 section 12, N4 section 1, N12 sections 18 and 19, and R21 sections 1 and 2 (Republic of South Africa, Government Gazette no. 40508). These exemptions only apply when the vehicle owners have fully complied with the regulations for "Exemptions from and Rebates on the payment of Toll 2016".

4.3.3.2 Portugal's Public Private Partnership Road Tolling Practices

Table 4.4. Public Private Partnership Road Tolling in Portugal

Portugal uses real tolls and shadow tolls to generate revenues for supporting PPP projects. By 2009, the country had 2,500 km under PPP contracts, of which 1,400 km (55%) were real toll roads, 900 km (37%) were shadow tolls roads, and while only 200 km (8%) were not tolled. In fact the PPP non tolled and free roads are often connector roads which are built by the concessionaire as part of the contract requirement. Portugal relies on both traditional and electronic systems of toll collection, though the traditional systems seem to be phasing out as all new roads being contracted now only use e-toll collection systems. Where the traffic volumes are projected to exceed 15,000 vehicles per day, real tolls are used and the concessionaire may be allowed to employ congestion pricing schemes. While, where the traffic volumes are projected to be below 10,000 vehicles per day, shadow tolls are the most preferred. The real toll revenue is based on a contract cap, while the shadow toll amount is a bid variable that is always subject to change during negotiations.

On average, Portugal attains a 12% traffic growth rate on its motorway system annually. Therefore, as traffic on these roads increases, the real toll revenues rise while the shadow toll contributions by the government keep falling. With PPP toll roads where the expected traffic volumes are modest, a combination of real tolls, and shadow tolls (which are based on traffic volume, availability and service performance) are used. However, the government is considering removing shadow tolls from highways where the real tolls have become sufficient in meeting project financial requirements, especially on urban commuter routes.

Modified from Brown *et al.* (2009)

4.3.3.3 United Kingdom's Road tolling practice

Table 4.5. Public Private Partnership Road Tolling in the United Kingdom

Apart from a few motorways (e.g. M6 Toll) that use real tolls to secure private sector financing, many of the national motorways in the United Kingdom use shadow tolls that are based on traffic volumes, service and asset availability, and performance payment mechanisms. For a fact, UK PPP motorways use less of the BOT, but more of DBFO-shadow toll model. Under the UK DBFO model, the winning bidder is one that offers the lowest toll charge per unit of traffic with better availability services and performance competences.

Modified from OECD (2008) and Brown *et al.* (2009)

4.3.3.4 United States of America's Public Private Partnership Road Tolling Practices

Table 4.6. Public Private Partnership road tolling in the USA

Toll rate setting varies between States. In some States, public entities directly control toll rates, in others its contract provisions that determine toll rates, and some provide the maximum rate beyond which toll rates cannot be increased. For instance, the rate of return on investment and the consumer price index (or any other inflation index applicable) in Minnesota and Florida respectively, are all toll rate provisions that require toll increases to be built in the contracts. In a few States (e.g. North Carolina and Tennessee) the toll charges are supposed to be removed from PPP toll roads, the moment the loan (debt) which is acquired for the development of such facilities has been fully paid. Majority of the PPP agreements include rate of return caps to ensure that the private firms do not make abnormal profits at the expense of roadway maintenance, construction quality, or reasonable user fees, and any profits made or revenues collected beyond the cap has to be remitted to the state highway fund (Federal Highway Administration 1992). The collection of tolls is done in various

ways, ranging from traditional tollbooths to video-based collection systems. Furthermore, most States apply the DBFOM PPP model, but with several variants (U.S. DOT, 2016:4-5).

Across the States, the clauses of "comparable non-toll routes" and "non-compete" routes are common in PPP policies or contracts. Most of the States do not promote the maintaining of "comparable non-toll routes" when PPP toll roads have been constructed, except for a few States (e.g. Arizona and North Carolina). While the "non-compete" clause (which stipulates that the public entity will not build another facility that would directly compete with the PPP toll road) is allowed by the majority of the States, with the exception of a few States (e.g. Alabama, Texas, California, Florida, North Carolina, Texas) where this is prohibited. However, with States that do not accept "non-compete" clause, they instead adopt the "compensation clause", where a State agrees to compensate the investor in case of reduced revenues when an alternative route has been constructed.

Modified from Iseki, Eckert, Uchida, Dunn and Taylor (2009), U.S. DOT (2016) and Baxandall, Wohlschlegel and Dutzik (2009).

4.3.3.5 India's Public Private Partnership Road Tolling Practices

Table 4.7. Public Private Partnership Road Tolling in India

Between the year 2000-2012, 125 toll projects (14,126 kms) were constructed in India. All the tolled highways apply the BOT (Toll) model, where the concessionaire recovers investment by charging fees from the users of the road facility. In case some BOT (toll) projects become non-viable during implementation or receive poor response from the private sector, they can be turned into BOT (annuity) projects. However, from 2012 the response rate for both BOT (toll) and BOT (annuity) has been poor that the government has had to shift many projects to the EPC model.

The main features of the toll policy include;

- Uniform rates of user fees are charged on all national highways having two or more lanes, permanent bridges, bypass or tunnel forming part of highway.
- The amount of toll fees payable is based on per kilometre of travel and the class of vehicle used.
- Toll rates are supposed to be reviewed and adjusted annually based on inflation rates.
- Discounted user charges are levied depending on the multiple journeys made in a day, or on a monthly basis for residents living in the nearby areas.
- Local residents that make short journeys are entitled to a steep discount

- For toll fees exempt vehicles such as government vehicles, a 10% capital support is paid to the concessionaire as compensation.

Both PPP toll and non-toll roads qualify for a maximum of 40% financial support from the viability gap fund scheme (created in 2005), on an equal distribution of 20% for capital expenditure costs, while the remaining 20% is for project activities during the operations stage.

Modified from Asian Development Bank (2015) and Haldea (2013)

In summary, though with a few exceptions, this subsection has provided tolling practices that cut across countries. Some of the common practices include: using both real and shadow tolls on a country's national roads, applying both traditional and electronic means for toll collection, tolling policies providing for alternative routes, adjusting toll tariffs on an annual basis based on either inflation or internal rate of return, provision of discounts, enforcement of congestion pricing schemes especially in urban areas, and the provision of exemptions to vehicles that serve the interests of the general public or vulnerable groups. On the other hand, some of the rare tolling practices include: stopping collection of tolls on roads whose debt repayment has been completed, shifting PPP toll road contracts to EPC arrangements, and barring the construction of alternative routes.

4.4 ANALYSING CASE BY CASE PPP ROAD EXPERIENCES AND PRACTICES

The road cases used in this section were drawn from four continents, namely Africa, Asia, Europe and North America. Africa is represented by road cases from Nigeria, South Africa and Mozambique; Europe by cases from Croatia and Norway; North America by a case from Canada; and Asia by a case from India. The road cases used in this subsection were purposively chosen based on the available information that would provide a good learning point for a country like Uganda, which is in the initial stages of implementing PPP road projects.

4.4.1 The Lagos-Ibadan Expressway project in Nigeria

From the year 1978 when the Lagos-Ibadan expressway was first constructed until 2009, no serious road upgrades or maintenance took place, yet the road usage capacity, travel time and road accidents had been increasing year in and year out (Babatunde, Perera, Udeaja & Zhou, 2013: 437). As government continued to be financially constrained, coupled with the emergence of the private sector investment interests in long term public infrastructure projects in Nigeria, in 2009 the government contracted Bi-Courtney Highway Services limited, a private company for 25 years, to reconstruct, expand and maintain the 110 Km Lagos-Ibadan Expressway at an estimated cost of 89.53 billion naira under BOT arrangement (Iloh & Bahir, 2013:105).

Although the contract was for 25 years, the concessionaire was expected to complete the construction works in the first four years, and later use the remaining 21 years to maintain the facility, and collect tolls from the road users in order to recover investment costs and realize returns. Key specific project assignments included increasing the road carriageways from four lanes to between six and ten as per the designs, construction of parking areas especially for heavy duty vehicles and rest areas for convenience, and provision of emergency communication equipment for the welfare and security of highway users (Iloh & Bahir, 2013:105).

Unfortunately, because Bi-Courtney Highway Services limited could not secure funding to execute construction work on time, in 2012 the government terminated the contract (Oluwasanmi & Ogidi, 2014:136), and subsequently contracted two private companies (Julius Berger and RCC) to continue with the project. However, the failure of this concession cannot entirely be blamed on the private sector, when the public sector to some extent also failed to competently execute its mandate. After assessing contract documents and contract performance, Babatunde *et al.* (2013: 438) attributed the failure of the project to: inadequate PPP knowledge, skills and capacity from both private and public sector players; failure to engage external technical advisers; poor evaluation, monitoring and due diligence by government; use of non-competitive bidding; signing of contract without designs and evidence of financing; failure by the concessionaire to access credit from local and international banks; land acquisition difficulties; poor risk allocation among the parties and; the politicization of the concession.

4.4.2 The Lekki Expressway project in Nigeria

The Lekki expressway was the first and largest PPP toll road in terms of financing and scope to be constructed in the whole of West Africa. Given that Lekki expressway is the main road in and out of Lagos, the biggest commercial city of Nigeria with over 21 million residents, government found it a priority to improve the road's previously derelict state and highly congested stretch between Lekki and Epe in the Lagos State (Osei–Kyei & Chan, 2016:174). Consequently, in 2006 a 30 year BOT contract between the Lagos State government and Lekki Concession Company (LCC) to expand and upgrade 49.5 km of an existing road was signed, and in 2008 the construction of 20 km of a new coastal road was added to the contract (Babatunde *et al.*, 2014:146-147). The project was estimated to cost US$450 million, and the largest financial contribution was to come from the private sector. The funding institutions were the Government of Nigeria, African Development Bank, Standard Bank, and a syndicate of local Nigerian banks (United Bank for Africa, First Bank of Nigeria, and Zenith Bank) (Wamwere, 2016: 29). The private companies were to receive returns on investment through direct user toll collections, and the user toll rates had been estimated to range between 1-2 US dollars depending on the vehicle category (Babatunde *et al.*, 2014:147).

The Lekki Expressway project has revamped transport services with outcomes such as improved security, road lighting, breakdown assistance, ambulance, customer call center, and a reduction in travel time from about 2 hours to 45 minutes (Kenny & Lavanchy, 2013:96). In addition, the project created over 635 temporary and 1146 long-term jobs, provided improved flora along the road with new green belts, and led to the development of the Lekki Free Zone, future Lekki International Airport, Lekki Hydrocarbon Park, and Lekki Deep Seaport (Osei-Kyei *et al.*, 2016:175; Kenny & Lavanchy, 2013:96). These successes on the project were achieved because of many factors. First, there was commitment from government to the project, evidenced by the provision of about US$42 million mezzanine loan by the Lagos State Government (Babatunde *et al.*, 2014:146), and land titles and rights which were timely issued and granted to the concessionaire to avoid any construction delays (Osei-Kyei *et al.*, 2016:175). Second, the project involved more of the local content in both construction and financial investments, which promoted community project ownership, better handling of national/local environment related project risks, and gaining more citizen support for the project. For instance, the Lekki Concession Company which is the SPV for the project, as well as financial institutions on the project, are Nigerian local companies, apart from a few institutions such as the African Development bank and Standard Bank. Third, the project financing agencies provided better lending terms to the project. For instance, Standard Bank extended "a 15 years loan of 2 billion naira in local currency at a fixed interest rate of 13.9% and also exempted the project company from principal repayments for four years" (Wamwere, 2016: 30).

Although the Lekki PPP toll expressway is viewed as a model road project for West African countries, the project has had two main setbacks which any serious implementing agency cannot underestimate. The first factor is the direct user tolls. The charging of direct user fees has been criticised by human rights activists, and resisted by local residents and other road users to the extent that protests and court cases have been on the rise. For instance, when the project company was planning to construct three tollgates within a distance of 5 Km, this was strongly fought by the public, and this left the government with no option but to provide alternative roads (Oluwasanmi & Ogidi, 2014:137; Amadi, Carrillo & Tuuli, 2014:425), even when the Nigerian laws never provided for construction of alternative routes on roads where toll sections existed (Solicitor, 2012:3). Furthermore, as the public ceaselessly protested against direct user tolls which were claimed to be exorbitant, in 2010 the government introduced shadow tolls which proved to be unsustainable to the extent that as early as 2013 the government had already reverted to direct user tolls (Osei-Kyei *et al.*, 2016:175). As pressure on direct user tolls continued to mount, the government had to acquire the project concession rights through buyback arrangements at an expensive estimated cost of N25.3 billion (U-Dominic, Ezeabasili, Okoro, Dim & Chikezie, 2015:71). The second factor is alleged corruption. The public complained of gross corruption due to contracting the concessionaire through direct negotiation processes without clear justification (Oluwasanmi & Ogidi, 2014:137).

In view of the discussions above, the project challenges arose as a result of: the devaluation of Nigeria's currency which shot up inflation to 35.2% between 2008-2013, and the concessionaire being given powers to increase toll fees without consulting government as long as the revisions were inflation based (U-Dominic *et al.*, 2015:71); hurried and unpopular project decisions by government; and weak ways of integrating the public into project activities, lack of competitive and transparent tendering process, poor planning and unrealistic project costs, and negative public perception about direct user tolls (Osei-Kyei & Chan, 2016:179).

4.4.3 The N4 Toll Road project in South Africa and Mozambique

The N4 toll road is the first cross border PPP road transport project to be constructed in the whole of Sub-Saharan Africa. The N4 toll road network, also referred to as the Maputo Development corridor stretches from Johannesburg and Pretoria in South Africa to Maputo in Mozambique. In 1996 the Trans African Concession, a private company, was awarded a contract through an open and competitive tendering process, which culminated into the 1997 signing of a 30 years BOT contract to finance, design, construct, rehabilitate, operate and maintain a 630 Km road network on the Maputo corridor estimated at a cost of R3 billion (Osei-Kyei & Chan, 2016:176-177; Taylor, 2000:7). The contract was concluded between the governments of South Africa and Mozambique on the one hand, and the Trans African Concession consortium on the other. The concessionaire was given three and half years to have completed the construction works, which was estimated to cost R1.5 billion (PPIAF, 2009:92; Taylor, 2000:7), and thereafter collect tolls direct from the users in order to generate returns on investment and also operate and maintain the road facility. It was entirely the responsibility of the concessionaire to mobilise funds both in equity and debt to facilitate the construction phase of the project.

In the original contract, the N4 toll road network was running from Johannesburg to Maputo, however, in 2004 the contract was amended to include the distance between Pretoria and Witbank on the development grid (PPIAF, 2009:92), which automatically increased the concessionaire's responsibilities. Out of the overall 630 Kms that were to be constructed, 56 Km were in Mozambique, while the remaining 574 Km were in South Africa (Farlam, 2005:12). The undertaking of the N4 road project along the Maputo corridor was purposely to foster economic activities between the two Republics. Although South Africa was more economically sound than Mozambique, the two countries had infrastructure investment challenges because of their respective past long apartheid and civil war eras. As a consequence, PPP arrangements provided the best investment option, since "Mozambique never had the money for road upgrades and maintenance at that time, and similarly South Africa had accumulated a road infrastructure gap of R37 billion" (Farlam, 2005:9).

Notwithstanding a few weaknesses, the N4 toll road is so far the most successful cross boarder and inner country PPP road project in SSA. Osei–Kyei and Chan (2016:176-177) mention that the N4 road

project minimised complaints from road users and local residents, created jobs for local residents, was delivered on time as per the contract, received positive customer responses about road quality, promoted better and reliable service delivery, and improved economic trade and cooperation between South Africa and Mozambique and the neighbouring countries of Namibia and Botswana, among others. To Taylor (2000:7) the project not only shortened the travel distance between Gauteng and Maputo by 150 Km, but also reduced the travel time to about four hours. Similarly the road was upgraded to a four and a two lane separated carriageway with lanes wide enough to accommodate large hauling vehicles (PPIAF, 2009:92). Furthermore, the traffic demand on the N4 road grows at 5-7% for passenger vehicles and 10% for freight per annum, and the concessionaire provides standby response teams to deal with incidents, is committed to continuous maintenance and upgrading, and provides the safest infrastructure facilities using the latest technology (Bhandari, 2011:8).

The positive achievements on the N4 toll road were achieved as a result of the close cooperation between the South African and Mozambique governments, the concessionaire, as well as the existence of situational factors. Osei-Kyei and Chan (2016:177-179) particularly attribute the project's success to: the use of companies that had expertise and knowledge in delivering construction projects within a local context; the tendering of projects through transparent and competitive processes; appropriate risk allocations and agreements; application of innovative approaches to overcome traffic congestions; provision of discounts to commuters and local residents; constant public consultations on toll increments; existence of a 24 hour road user help line and security surveillance service; the commitment and goodwill of government exhibited by guaranteeing of the concessionaire's debt and equity; and the cordial relationship between successive governments and the concessionaire. Furthermore, the PPIAF (2009:94) argues that the N4 project was a success because:

- South Africa already had experience in PPP toll road projects;
- the corridor between Pretoria, Johannesburg and Maputo already had an established non PPP route well before the project initiation;
- South African high toll revenue collections subsidise Mozambican low road user toll revenues;
- of the availability of an efficient axle load control system along the corridor which minimises road damage that would come from overloading of trucks, and;
- Gauteng and Maputo are major economic trade centres for South Africa and Mozambique respectively, and at the same time the Maputo port works as an alternative exportation port to Durban for South Africa.

Though the N4 project sets the scene for self-reliance by African countries when investing in transport infrastructure, it had some implementation challenges. To some extent the project economically favoured South Africa over Mozambique. In fact, all the investment firms of the project were South

African companies, including the Mines employees and government official Pension funds, except for Bouygues, a French international construction company (Farlam, 2005:10; Taylor, 2000:7; PPIAF, 2009:91). Furthermore, there was difficulty in harmonising dissimilar laws, taxation systems, currencies and company reporting standards of the two countries. Specific to the legislation, South Africa had a mix of Roman-Dutch, English-Common, and the Indigenous-Customary laws, while Mozambique's laws were aligned to the Portuguese laws (Wamwere, 2016:22). Similarly, the N4 project started without a well-established PPP legal and institutional framework, especially from Mozambique's side (Taylor, 2000:10).

Finally, PPIAF (2009:93-95) cites allegations about the project having benefited only big companies, since small scale business firms had no capacity to invest in such a heavy and long term PPP investment project. On the other hand, it can equally be argued that big firms were at a great risk, since the two governments never provided subsidies to the concessionaire in case of a fall in the expected traffic volumes. In fact, actual traffic volumes fell below the project financers' expectations (PPIAF, 2009:93) because of the unwillingness by the majority South Africans to pay for a road which previously had been free of usage, and the unaffordability by Mozambique to pay toll fees because of widespread poverty in the country (Taylor, 2000:9). Allegations of corruption especially during toll fees collection also emerged, though camera systems were later installed at toll booths to detect any fraudulent practice (Osei-Kyei & Chan, 2016:177).

4.4.4 The ETR 407 Highway project in Canada

Given that a few scholars have done research on the ETR 407 Highway, the discussions in this subsection about the ETR 407 are based on only two research works of the UNECE (2012), and Persad *et al.* (2005). In addition, from the publications that was reviewed, other than the 149 Capital Beltway in Virginia, there seems to be hardly any PPP highway project in North America that provides significantly different experiences from the ETR 407.

A brief account about the 149 Capital Beltway is given hereafter. Before the 2005 PPP agreement which allowed a private company to add four High Occupancy Toll (HOT) lanes on the stretch between Springfield and the Dulles Toll road, the 149 Capital Beltway had eight general use lanes that never attracted user charges. Whereas the eight general use lanes were to remain free of user fees, the four HOT lanes were subjected to user fees upon completion of their construction. Figure 4.2 below, shows how the proposed four "HOT" lanes were going to be configured alongside the existing general use lanes.

Figure 4.2. A pictorial of the eight "general use" and the four "HOT" lanes on the Capital Beltway in a 4-2-2-4 lane alignment

Source: Persad *et al.* (2005:17)

The unique lessons emerging from the 149 Capital Beltway PPP contract are as follows: Buses, vans and cars with more than two passengers, and emergency vehicles were not supposed to pay tolls on the HOT lanes; and vehicles with less than three passengers on board were to pay user fees (based on the number of passengers in a vehicle, the congestion levels, and the time of the day); while trucks were prohibited from using the HOT lanes. In addition, there were serious lapses in the PPP agreement, in that, until the contract amendments of 2007, the 2005 agreement never provided for handover requirements and maintenance standards.

In the remaining paragraphs of this subsection, the discussion is directed towards the performance of the ETR 407 Highway project. The ETR 407 is a 68-mile electronic open-access toll highway in northern Toronto which works as a bypass to Highway 401. Between 1993 and 1997, the province of Ontario constructed the ETR 407 road under the DBO framework with the purpose of decongesting Highway 401. After the construction phase in 1997, the private company was expected to operate and collect toll revenues from road users for 35 years to essentially enable government to recover the US$1.6 billion bond fund it had used to construct the road. However, after 18 months of operation, in 1999 the government leased the road to Cintra-Macquarie, a private company, at a cost of US$2.1 billion to finance, operate, manage, maintain, rehabilitate and collect tolls for 99 years. According to the lease agreement, the lessee was obliged to comply with all the road safety standards set by the provincial government, and the official government vehicles were exempted from payment of tolls.

In order to control traffic and revenue generation on the road, the lease agreement introduced the congestion relief and expansion clauses respectively. The congestion relief clause allowed the concessionaire to increase toll rates based on traffic growth. However, in case the concessionaire increased toll charges beyond 2%, the provincial government of Ontario would be entitled to some revenue payment from the lessee. As for the expansion clause, both the contract and the road designs provided for the expansion of the ETR road sections after experiencing high traffic volumes, as opposed to constructing a parallel free road. In addition, the laws also assured the investor's expected revenue gains by denying the renewal of license plates for road users who would refuse to pay toll fees.

Surprisingly, with such measures in place, a few years into the operation the ETR project had become unpopular due to: increase in litigation cases from a new government (the labour party) which was against tolls, congestion fees, and the conditioning of license plate renewals on toll payment; the public continued opposing toll rate increases by the lessee (e.g. shortly after lease signing the company increased tolls by 200% at peak hours); the failure of the ETR 407 road to substantially reduce traffic congestion on the 401 road; the contract giving powers to the lessee to increase tolls without seeking government approval; the provisions for the "after every five years renegotiation exercise" were making the lessee too powerful to accept any future change proposals by government; and like the 80 years that were awarded to the private contractor to collect toll fees on the 149 Capital Beltway, the 99 year lease contract for the ETR 407 Highway project has been viewed as a too long time to entrust the management of public facility to a single private consortium.

4.4.5 The East Coast Road (ECR) project in India

The discussion in this subsection about the ECR project is based on only one journal article from Rajan, Siddharth and Mukund (2010). Notwithstanding the fact that Rajan, in particular, has widely published on road PPP projects in India, this publication has attracted many readers and citations. This makes us submit that this article was well researched and gives a good representation about what generally happens on PPP road projects not only in Asia but also in other continents across the world, as per the descriptions below.

As the quality of ECR continued deteriorating because of inadequate government resources to maintain the road network, the Government of Tamil Nadu (GoTN) decided to upgrade and renovate the road through Rehabilitate, Improve, Maintain, Operate and Transfer (RIMOT) arrangements. Subsequently, in 2000 the GoTN contracted Tamil Nadu Road Development Company (TNRDC) for 30 years (excluding one year for construction) to upgrade and renovate 113.2 Km of the ECR at a cost of 600 million rupees (Rs). In particular, the services under the operation phase included highway patrolling, ambulance services, breakdown tow away service, emergency call boxes, and at the end of the operation period, the entire management of the road facilities would revert to government.

During the implementation of the project a number of drawbacks were encountered, which included; the government's failure, due to political pressure, to implement the 8% annual toll increments even though it had been provided for in the concession agreement; a ban on sand quarrying from a river bed situated along the project which led to a stoppage in the movement of sand bearing trucks on the road, yet the sand carrying trucks were expected to contribute about one third of the projected revenue; loss of revenue from State Transport Corporation buses due to discounts on monthly passes which were surpassed by 70% to 80%, as discount rates had not been linked to the number of trips per day and yet each bus made multiple trips a day; and construction inconveniences to the construction team due to the geometric design of the road which had several curves. In addition, 167 families were displaced because of the acquisition of 12.5 acres of land for road upgrade, and deforestation was evident, as an estimated 851 trees were cut during the road upgrades. However, as a compensation mechanism for the lost vegetation cover, a contract provision for planting 10,000 trees was made.

In light of the above hindrances, the project has made some remarkable progress, which include: the average growth in traffic has been around 11%; the road was constructed within the estimated cost and time; areas surrounding the ECR have had an increase in industrial and commercial investment; the project was able to generate cash profits within a few years after starting operation; and over time the project has been experiencing a steady increase in revenues. For instance, the average daily revenue collections increased from Rs.172, 000 in 2002-03 to Rs.210, 400 in 2005-06 and to Rs.257, 534 in 2006-07.

The remaining few paragraphs below highlight the factors which might have caused the project success. The government made the following contributions: provided detailed inspection schedules upon which the contractor's regular maintenance responsibility would be assessed; ensured law and order was maintained; provided financial support throughout the project life cycle; and made sure that land acquisitions, issuance of approvals, and toll collection notifications were done on time.

Specifically in favour of the contractor: the contract prohibited the government from constructing a new competing road or operating a parallel old road on a commercial basis during the concession period; the government was mandated to extend the contract up to a maximum of three years until the required contractual return has been realised, upon the concessionaire's request, in case of failure to achieve the specified investment return with in the original contract period; and government is required to provide a 20% return guarantee on the outstanding cost of the project for the concessionaire. From the finance perspective: the project used conventional corporate financing, which not only avoids substantial costs of legal fees and incorporating a new company (i.e. SPV), but also gives the concessionaire the flexibility to mobilize revenue in case of financial distress; and the funds raised by the company were

predominantly utilized for this project, because the ECR project was the only major project for TNRDC at the time.

Furthermore, given that ECR road was an upgrade project, minimal construction risks were encountered since no complex under-passes, over-bridges and interchanges needed to be constructed; and public protests were minimised because only a few inhabitants were environmentally affected or displaced, and frequent road users and vehicles for bona fide local residents living along the ECR stretch were given toll discounts. Finally, the Highways Act of 2001 encourages quick disposition of land acquisition litigation cases, and also gives the government more powers to easily evict road reserve encroachers.

4.4.6 The Istrian Y Toll Motorway project in Croatia

The discussions of this subsection are anchored on the research works of Bjørberg, Kristiansen, Graham, and Salaj (2015). The Istrian Y Toll motorway project was chosen because of rare contract features it exhibits, which included, among others, tax exemptions and refunds, and the phasing of the road network construction, which ultimately meant that the commencement of the toll fees collection had been phased too. A detailed assessment of the Istrian Y Toll motorway follows hereunder.

The Istrian Y toll motorway is a 145 Km single and two-lane dual carriageway between the A8 and A9 motorways, with differing toll charges for passenger vehicles ranging between Euro 1.90 and 3.70 depending on the toll road section used. In 1995, the government of Croatia contracted BINA-ISTRA concessionaire (with Bouygues a French firm as the main construction company) for 32 years to reconstruct and develop the Istrian Y toll motorway under a DBFMO framework until 2027. The project was planned to be implemented in four phases, and after the completion of the first phase in 1999, the concessionaire practically had 28 years within which to collect tolls, and thereafter return the road facility to the government at no cost. The actual construction of the project phases vis-à-vis the time has been as follows:

Table 4.8. Project phases with their commencement and completion dates

Project phase	Commencement date	Completion date
1A	1997	1999
1B	2003	2006
2A	2008	2011
2B	2013	Had been estimated to be completed in 2016

Modified from Bjørberg, Kristiansen, Graham, and Salaj (2015)

Some of the project achievements so far include: increase in the real estate demand due to improved road network to the major cities; the development of tourism along the route because of the discovery of archaeological sites during the construction works; the increase in toll revenues because of the increase in the passenger vehicles which rotated around 1.5m and 7.2m between 1995 and 2013; the installation of innovative and high quality construction solutions along the motorway, which included 48 overpasses, 55 underpasses, 18 viaducts, 3 bridges and with a number of road intersections; the travel distance over the Mirna Bridge was shortened by 29.7 Km and the corresponding travel time was reduced by 71.2 minutes for passenger vehicles; a substantial financial contribution has already been made by both the public and private sector partners; and the project design caters for the future expansion and upgrades of the motorway.

The above achievements may be attributed to two main viewpoints. The first being the need to ensure that the concessionaire remains financially sound until the end of the project, which is a result of: the contract giving the concessionaire rights to start collecting tolls the moment the construction of each project phase has been completed; the government being required to compensate the concessionaire with the difference in case of a fall in the targeted annual toll revenues; the concessionaire being exempted from income tax and all other road taxes for 14 years; and throughout the project life time, the concessionaire is being exempted from Value added tax (VAT) on toll revenues and is also entitled to a VAT refund on construction materials.

Furthermore, the second view point is the contract providing effective risk and conflict management measures, which included: the requirement for the concessionaire to acquire all the necessary permits before commencement of construction work; the selection of the concessionaire through an open international tendering process; the government being entitled to a 30% share of excess profits from the project revenues, while 70% would be retained by the concessionaire; project design approval which is the sole responsibility of the public partner could only be secured before the start of the construction work; the government was responsible for administering the acquisition and transfer of land for construction purposes; the concessionaire was responsible for collecting tolls from users, while the powers for setting toll rates was a mandate of the government; the contract price is expected to remain fixed, except for cost overruns which have been approved by the public partner; the concessionaire would lose 12.5% of the construction price in case of a failure to complete a project phase on time; and the concessionaire has the right to cancel the contract in case of severe regulatory risks, or if the public partner never makes its financial contribution within four months (including days after notice time, and the contract time lag within which the contribution should have been effected).

However, the project has not fully achieved the intended objectives due to an increase in investment, maintenance and operation costs resulting from the high traffic volumes which are above the carrying

capacity of the road, and even with an increase in the passenger traffic volumes, the toll revenues are still below the projections because of the number of freight trucks which are far below the estimates. Finally, phases 2A and 2B of the project never had determined commencement and completion dates, since the condition for constructing these project phases was that the traffic intensity needed to average at 10,000 per day overall, and at least 16,000 per day in summer.

4.4.7 The E-39 Highway project in Norway

The discussions of this subsection are tailored to the research works of Šeba (2015), explaining that what makes the E-39 Highway project an exceptional PPP road case rests in: the government being responsible for collecting tolls; bonus payment; compensations; and the elaborate allocation of project risks between the public sector and the concessionaire, among others. A detailed account of the E-39 Highway project is provided below.

The E-39 highway stretches from Klett to Baardshaug. The project covers 27 kms, where 22 kms are for new road construction, while the remaining 5kms are for the old road improvement. The new road section consists of 10 kms of tunnels and 12 bridges. The initiation of the project was the result of the old road having sharp corners, poor visibility and high traffic. As such, vehicle overtaking was problematic, logistics costs and road accidents were on the rise, and unnecessary transport delays were common. Consequently, in 2003 the government contracted a private SPV company through BOT arrangements to improve the existing road and also add new road sections, after an open national bidding process. The signed contract period was 27 years, of which the first 2 years were the construction phase, while the remaining 25 years were the operation phase.

Upon completion of road construction in 2005, the road was immediately opened for use, and the concessionaire was obliged to collect toll revenues on behalf of the Norwegian Roads agency. Two critical issues emerging from the E-39 PPP project are the conditions surrounding the concessionaire's payment receipt, and the way project risks were allocated between the public and private partners. From the payment perspective, the road agency was responsible for making annual payments to the concessionaire based on the facility availability and the quality of services provided during the project's operating phase. The facility availability payments were conditional upon the concessionaire designing and constructing high quality roads that require minimal maintenance, and whose maintenance schedule is capable of avoiding busy and congested times. At the same time the service quality (operation and maintenance) payment were based on the cleanliness of the road and surrounding areas, road surface tests, clearing snow or salting the road, lighting of the road, the quality of the air and safety systems, and the time taken to replace broken assets (e.g. traffic signs). In addition, the concessionaire would receive a bonus payment in case of improved safety performance (e.g. reduction in the frequency of

accidents), and would also be entitled to a monetary compensation for wear and tear of the road in case heavy goods vehicles exceed the contract traffic forecasts.

As far as risk allocation is concerned, the private company assumes more risk responsibilities than the public partner. The private sector is largely responsible for: costs of compliance with changes in general legislation and statutory requirements; cost overruns for operations, maintenance and service specifications; damage to infrastructure; latent defects on both old and new road sections; and adverse weather conditions. On the other hand, the public partner is solely responsible for traffic and force majeure risks. However, the contract stipulates that latent defects beyond the end of the contract, and regulatory and land acquisition risks require joint responsibility, while any cost resulting from a change in the project scope would be incurred by whoever causes the change.

In summary, this section (4.4) explored PPP road project descriptions, their achievements and failures, and factors that partly contributed to their success or failure. From the analysis of the seven PPP road cases above, common PPP road project experiences and practices were identified. Most PPP roads are largely brownfield projects executed through renovation and road upgrade arrangements, with road bypasses and extensions being constructed as new roads. Private and public partners usually sign BOT agreements, which contract duration average between 25 and 35 years. Out of the total contract period, the construction phase takes up 1-4 years. Whereas the financing of the construction phase is mainly the responsibility of the private sector (and at times with small contributions from government), the payment demands of the contractor for the construction works as well as the operation and maintenance of the road facilities are often cleared using revenues from direct user tolls.

Globally, the construction of roads through PPP arrangements has improved road quality and support services, reduced construction time and road congestions, created jobs, reduced travel time and distance, improved road safety, enhanced mushrooming of private businesses, and facilitated community development. Based on the road cases reviewed in this section, the achievements from the PPP road projects can be attributed to: short term scheduled payments that are conditioned on the availability and quality of infrastructure and service, periodic growth of direct user revenue collections, extending bonus payments to the contractors in case of reduced road accidents, compensating the concessionaire in case of an increase in traffic volume beyond traffic forecasts or providing subsidies in case of a reduction in projected road usage, minimised complaints from road users and local residents, full commitment and goodwill of government for PPP projects, on time road maintenance and upgrades, and provision of road safety features.

However, to a certain extent, the effective implementation of PPP roads has been limited (evidenced by project delays, premature contract termination, abrupt changes in contract terms and conditions, lack of project funding by the concessionaires etc.) due to litigation cases, allegations of corruption, public

protests against direct user tolls, low traffic volumes, poverty and civil wars, selective tendering processes, poor planning and feasibility studies, unbalanced allocation of risks between the public and private partners, failure to engage competent project advisors, and the irregular designing and implementation of contracts.

The critical lessons that can be drawn from the roads cases discussed in this section are in the form of findings, recommendations and challenges. The findings are as follows: control of traffic seems to succeed through expansion of existing roads and charging of congestion fees rather than constructing new parallel non toll roads; compared to Greenfield projects, upgrading Brownfield roads greatly reduces costs and risks of delivering a road project; and where the costs for incorporating a new company are too high or where financial distress may be rumoured to occur in future, conventional financing is preferred to SPV financing. The recommendations include: unless small firms are subcontracted, they may for a long time remain disfavoured to participate in PPP investment projects; well calculated discounts, subsidies, contract period extensions, increase in toll rates or any other risk mitigation decisions should be made with the intention of avoiding project risk escalations; and governments should support the private sector so as to remain financially stable throughout the contract period. Finally, lack of PPP country experience, missing a local content in both manpower and other resources on PPP projects, lack of well-established or implemented legal and institutional systems for national projects, and lack of harmonised legal, economic, social and political countries' agendas for cross border projects, are the main hindrances towards successful implementation of PPP projects in the road sub sector.

4.5 CHAPTER SUMMARY

Given that each section and subsection of this chapter has been summarised, the overall summary of the chapter is done in a stylised manner, by just highlighting the main areas covered and findings that discussed in this chapter. The main areas covered in this chapter are summarised hereafter. From a financing perspective, the chapter has discussed the causes of the GFCs, the impact they have had on PPP projects, how a number of countries responded to the GFCs' negative impacts, and strategies on how the globe ought to respond to such financial challenges in future have been provided. Furthermore, road tolling was discussed in line with the various road tolling practices countries have employed, and the financing potential tolling might have on road infrastructure when demand risks have been mitigated. The last section of this chapter provides experiences and practices on PPP road interventions across the globe, upon which lessons can be drawn for nascent and emerging PPP markets.

With respect to the main findings of the chapter, a summary is made with regard to GFC, tolling, and PP international experiences. Regarding the GFC the findings are as follows: Though Global financial crises sour financing conditions, PPP investment can still grow as long as the governments take

formidable measures such as innovative financing, designing temporary schemes to respond to abrupt and rare shocks, and having both project and contract structures and legal and institutional frameworks that are strong and respected. It is submitted that, the learning curve syndrome led countries to moderately handle the 2008 GFC better than its predecessors, the Asian and Dotcom bubble crises.

With PPP tolling, the findings include: the tolling systems are migrating from manual or semi-manual to full automation; direct user fees are more often used than shadow tolls; the management of tolling practices is best placed with government; flexible toll fees easily solve low demand for toll roads; and ancillary facilities are a good mechanism of supplementing inadequate toll revenues. On the other hand, tolling roads without enough stakeholder engagements causes continuous protests, and globally there is great resistance against tolling previously free access roads.

The findings from the PPP international experiences are: The construction phase takes the shortest duration compared to other phases of a PPP road project, PPP road projects in the developing world (especially Africa) are more challenging than in the developed world, and strong/powerful economies can more easily influence PPP investment growth in other economies than small or weak economies can do to strong/powerful economies. Finally, undertaking only a few PPP projects at a time encourages successful outcomes (e.g. India-with ECR), and the reverse is true when a country executes several PPP projects at the same time (e.g. Nigeria- with Lekki and Lagos-Ibadan expressways, among others).

5 CHAPTER 5: THE EVOLUTION OF THE ROAD SUB SECTOR AND THE FUTURE PUBLIC PRIVATE PARTNERSHIPS ROAD PROJECTS IN UGANDA

5.1 INTRODUCTION

With the road network being the backbone of the transport sector in Uganda, over the past three decades the government has prioritized reforming the sub sector over railway, water and air transport, and other sectors of the economy, as already highlighted in chapter one. The most trending global reforms of the road sub sector is the commercialisation/marketization, co-production and co-regulation of public road infrastructure and services. As a background to chapter eight (which assesses the suitability of the PPP environment for road infrastructure development in Uganda), this chapter pays attention to the overview of road development in Uganda, the road reforms and their impact on road sub sector performance, and the state of the roads and the physical performance of the sub sector. Finally, the chapter provides a brief description of the pioneer PPP road projects lined up for future implementation.

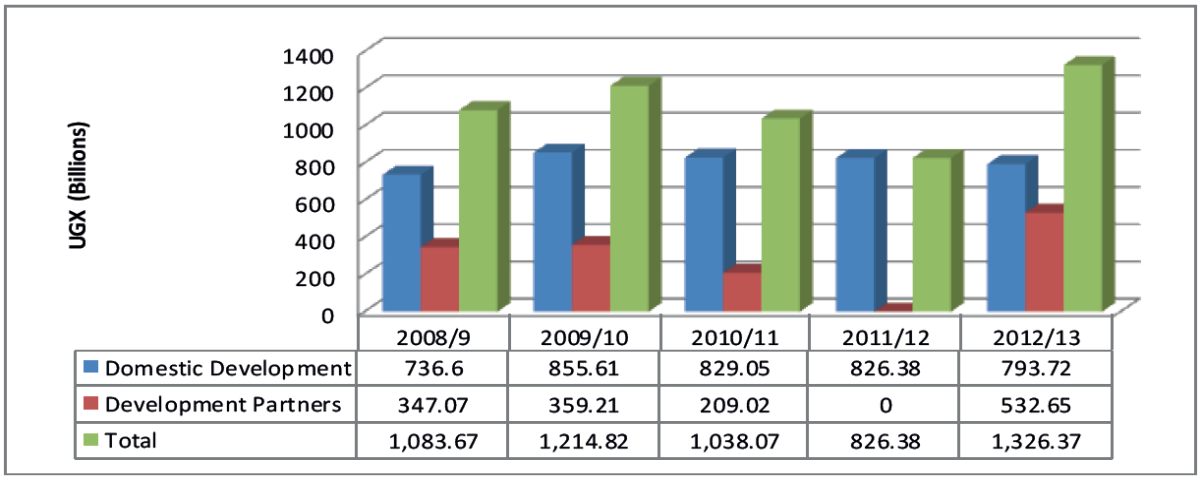
5.2 AN OVERVIEW OF ROAD INFRASTRUCTURE DEVELOPMENT IN UGANDA

Road development programmes in Uganda are centred on facilitating growth for all sectors of the economy, improved quality and reduced cost of goods and services, augmented public and private investment, and amplified cross border trade through reduced traffic congestion, journey time, accidents, vehicle operating and road construction costs, and minimised losses in road asset value (Kagina, 2017). Uniquely, compared to other modes of transport, roads have the ability to move many passenger groups and goods consignments between several origins and destinations with widely available door-to-door collections and deliveries, and work as a modal interchange with all other modes of transport (Uganda Road Fund-URF, 2016:7; National Transport Master Plan, 2008-2023:41). As such, roads reduce the cost of doing business (Shinyekwa & Ntale, 2017:3). This is a factor that explains why road agencies aggressively aim at increasing stock and improving the quality of the road network countrywide (Draft Road Tolling Policy, 2017:2).

However, the road sub sector continues to be troubled with vehicle overloading (increases road maintenance to around US$21m annually), inadequate financing, foreign firms executing 80% and financing 60% of road works, unsafe roads (US$0.8bn lost to accidents per annum), slow and expensive land acquisition processes, and weak technical and financial capacity of the local construction industry (Kagina, 2017). Local capacity growth may remain an unrealisable dream as long as local construction firms continue operating under very prohibitive national investment conditions. Unlike local firms, foreign firms (e.g. Chinese companies) access low interest credit, and receive commercial bank guarantees and government subsidies from back home, and their governments have, and effectively

implement, national laws that give preference to local firms' involvement in public projects over foreign ones.

Roads financing in Uganda is a composition of contributions from development partners and the Government of Uganda. Between the F/Ys 2008/2009-2012/2013 the annual average contribution from government stood at 80% and only 20% came from the development partners, as shown in figure 5.1 below.



	2008/9	2009/10	2010/11	2011/12	2012/13
Domestic Development	736.6	855.61	829.05	826.38	793.72
Development Partners	347.07	359.21	209.02	0	532.65
Total	1,083.67	1,214.82	1,038.07	826.38	1,326.37

Figure 5.1. Road Sub Sector Financing as a Share of Government and Development Partners

Source: Bogere *et al.* (2014:16)

However, between the 2013/2014 and 2017/2018 F/Ys, financing for roads increased to 36% annual average for development partners and reduced to 64% for government (computed from works and Transport Sector Budget framework papers for the F/Ys 2014/2015-2017/2018), with exceptions in F/Ys 2011/2012 and 2014/2015 when the development partners contributed 0% and 0.22% respectively. This trend contradicts the government's ambitions of reducing dependence on donor funding (Bogere *et al.*, 2014:16) in the medium and long term. Furthermore, contrary to the budget support assurances for the road sub sector, fund releases repeatedly fall short of the approved budgets. For instance, in the F/Y 2013/2014 the road sub sector registered a deficit of 9.339% and 10.331% from government and development partners respectively (Ministry of Works and Transport sector Annual performance Report, 2013/2014:28). As a result, road performance annual targets equally get affected. Lately, the government has adopted foreign direct investment for financing road projects (e.g. Kampala Entebbe expressway), and is expediting private sector financing (from both local and foreign firms) considerations for PPP road projects.

Sustainability of road development and maintenance requires concerted and harmonised efforts from financiers and other key stakeholders with road management complementary roles. As arrows in figure

5.2 below indicate, whichever actor issues guidelines or provides funding to implementing organisations must monitor and evaluate performance, and in turn, implementing agencies must provide accountability through the available reporting channels.

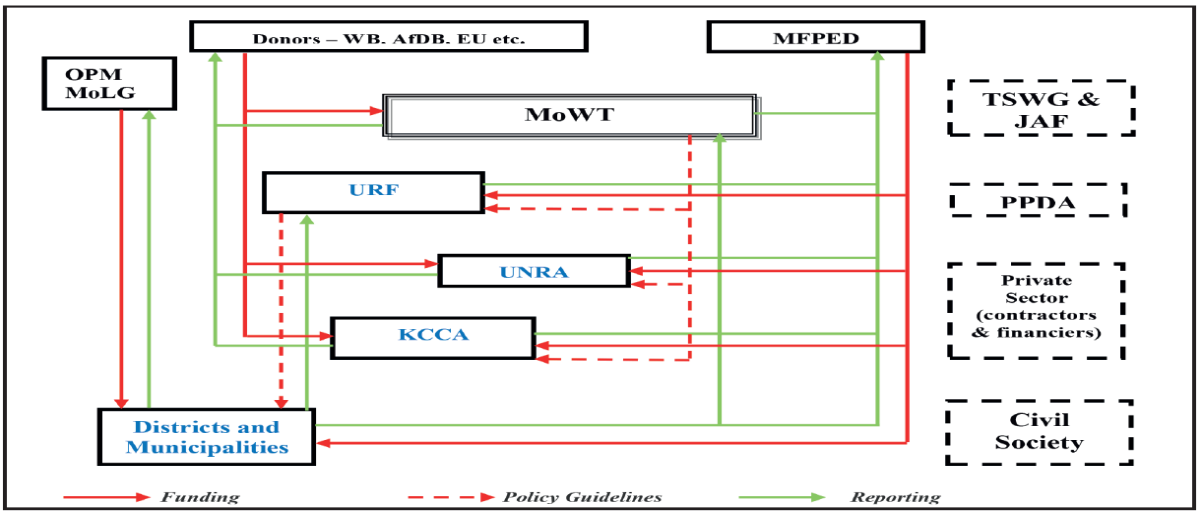


Figure 5.2. The relationship among the key road management actors in Uganda

Source: Bogere *et al.* (2014:3)

Below is a summary of key actors (as captured in figure 5.2 above) and the roles they play towards the development or maintenance of roads in Uganda. The MFPED allocates funds to the sub sector from the national budget, controls expenditure on public roads, and oversees the implementation of PPP road projects through the PPP Unit. MoWT develops and oversees the implementation of road transport policies, sector strategic plans, programmes and projects. The Office of the Prime Minister (OPM) and the Ministry of Local Government (MoLG) finance road projects under special interventions or programmes. The Donors supplement government funding and capacity building in the road sub sector, and monitor and evaluate road projects performance through the Joint Assessment Framework (JAF). The development and maintenance of roads is the responsibility of UNRA for national roads, KCCA (Kampala Capital City Authority) for Kampala city roads, Municipal councils for municipal roads, and the Districts for district roads (including town council, and community access roads at sub county level). The Uganda Road Fund (URF) finances the maintenance of public roads.

Other key actors include the Transport Sector Working Group (TSWG) and civil society organisations that advocate for best practices and road reforms for the wellbeing of society and preservation of nature. The Public Procurement and Disposal Authority (PPDA) provides procurement guidelines for road projects and other general activities (excluding PPP projects), and the private sector executes most of the road works, including financing and consultancy services. Although not captured in the above

framework, the Auditor General, the Inspector General of Government (IGG), and the Parliament and District Accountability committees play critical oversight duties, among other stakeholders.

5.3 ROAD SUB SECTOR REFORMS AND THEIR IMPACT ON ROAD DEVELOPMENT

Whereas Uganda's road infrastructure was described as one of the best in Sub-Saharan Africa prior to the 1970s (Booth & Golooba-Mutebi, 2009:2), the country's civil strife between 1970 and 1985 elicited reduced transport fleets, increased transport costs, and recorded about 55% loss of road network investment due to neglected and mismanaged road development and maintenance (Kumar, 2002:2). Between 1986 and 1995, the road network was convalescing at a pace difficult to turn around a ravaged economy, until 1996 when the government in collaboration with donor agencies embarked on Road Sector Development Programs (RSDPs). In order to provide efficient, safe and sustainable road networks, the RSDPs (between 1996-2017) concentrated on developing the local construction industry to commercialise technical (engineering) and procurement, and on reforming the road administration by separating financing from procurement and implementation, and separating planning, policy and regulatory functions from each of the former functions (Bogere, *et al.*, 2014:13; Kumar, 2002: ix).

Central to the reforms was the need for the Ministry of Works and Transport to transition from being a planner, policy maker, regulator, procurer and constructor, to concentrating on executing the first three roles. Furthermore, the Ministry of Finance was to ensure effective utilisation of funds appropriated to designated agencies, and update the mid-term and long-term road investment programs, in addition to participating in planning and financing road projects. Although a Road Agency Formation Unit (RAFU) was formed as early as 1998 to expedite the restructuring process, up to the end of 2007 it had hardly achieved much. By then, the road sub sector had "low volume of work, government spending on roads was low by international standards, unit costs were exceptionally high, corruption in procurement and quality control was widespread, lacked competition and semi-autonomous road agencies, and the local contractors and consulting engineers had low morale" (Booth & Golooba-Mutebi, 2015:6). Notwithstanding the shortcomings, RAFU paved the way for the formation of two semi-autonomous agencies: UNRA in 2008 and URF in 2009 formed subsequent to the enactment of the Uganda National Roads Authority Act 2006 and Uganda Road Fund Act 2008 respectively.

The next subsections (from 5.3.1 to 5.3.6) provide a detailed evaluation of the road reforms between 1997 and 2017.

5.3.1 The Reformed Ministry of Works and Transport

Prior to the declaration of local government entities into District, Urban and Community Access roads (DUCAR) agencies and the formation of UNRA and URF, the development, maintenance and financing

of public roads were responsibilities of MoWT, with support from MoLGs for works and MFPED for financing. Today, the reformed MoWT is responsible for formulating plans and policies, setting and regulating standards, playing capacity building and advocacy roles, and monitoring and evaluating performance for the Works and Transport sector. With the road sub sector in particular, MoWT continually plans and coordinates national emergency responses, and extends policy and strategic guidance as well as political and operational oversight (in collaboration with MFPED) to UNRA, URF, Districts, Urban agencies, and Local Council IIIs for effective maintenance and development of public roads.

Since the introduction of the roads reform process in 1998, a number of organisations and legislation have been established and improved under the leadership of MoWT (formerly, Ministry of Works, Housing and Communication). Some of the organisations created is UNRA, URF, Roads Industry Council (RIC), Uganda Association of Consulting Engineers (UACE), Uganda Institute of Professional Engineers (UIPE), Uganda National Association of Building & Civil Engineering Contractors (UNABCEC), and National Safety council (NSC). Legislation adopted include: Road and Safety Act (RSA), National Construction Industry (NCI) policy, Draft Roads Tolling policy, Draft Roads Bill (to replace Roads Act of 1949), Uganda Construction Industry Commission (UCICO) bill, UNRA Act, URF Act, UNRA regulations, Building Control Act, Force Account guidelines, Draft Building Control Regulations (amended 2012), and several amendments. Other vital documents are the National Transport Master Plan (NTMP 2008-2023, that includes the Transport Master Plan for Greater Kampala Metropolitan Area-GKMA), General Specifications for Roads and Bridges, and District and Urban Roads Design Manual. In effect, a sizable improvement and increase in the road network and local road construction companies, as well as private sector (both local and foreign) participation in road projects has been realized.

However, using the envisioned responsibilities as a benchmark of the achievements, the reformed MoWT under-delivers on its mandate. MoWT still maintains and develops a few DUCARs and bridges (Booth & Golooba-Mutebi, 2009:14; OAG Report, 2015b:21; Odongo, 2017:6), without request and free consent of the designated agencies (DAs), contrary to the PPDA Force Account guidelines of 2014. For instance, between F/Ys 2012/2013-2013/2014, MoWT signed and executed road construction contracts worth UGX 50.2bn (OAG Report, 2015a:20), a role that is outside its mandate and in conflict with its oversight function. On the other hand, DUCAR agencies often reclassify roads from community to district or urban status without a ministerial instrument from MoWT (Odongo, 2017:6). Additionally, a few government ministries implement road programs without securing a delegation mandate from MoWT (Odongo, 2017:6). Examples include: Ministry of Local Government that implements Community Agriculture Infrastructure Improvement Programme (CAIIP), District Support Livelihood Programme, and the Millennium Villages project; while the Ministry of Lands and Urban Development

implements the Albertine Region sustainable Development projects, and the Uganda Support to Municipal Development (USMID) programme (Odongo, 2017:6; OAG Report, 2015c:22). The above cases are signs of misaligned coordination and monitoring, and duplication of roles.

Furthermore, according to a VFM audit conducted on the effectiveness of the MoWT in regulating the construction sector covering three F/Ys (2012/13, 2013/14 and 2014/15), a number of construction standards and quality management flaws by MoWT was established, which included:

- Limited progress in establishing UCICO and a national construction law, and a national building code and regulations that would facilitate effective regulation of industry standards and practices;
- Neither supported nor reviewed statutes, and professional ethics and codes of conduct of regulatory and professional bodies, which resulted in substandard constructions, and massive loss of human lives and infrastructure;
- Never conducted research on construction materials that would have promoted innovation and technological advancement in the sector;
- The ministry performed at only 55% in relation to conducting audits/inspections on engineering standards compliance by local government entities, and never monitored road construction activities for UNRA, KCCA, and Ministry of Local government; and
- Delayed and never prioritised the review of roads manuals, standards and guidelines to match the skyrocketing road traffic (OAG Report, 2015c:20-23; OAG Report, 2015a:21-22).

The same Audit report attributes most of the above challenges to diverting funds to implement different activities of the ministry instead of planned ones, lack of adequate capacity by MoWT to monitor multiple projects concurrently, and conflict of interest among public institutions and professional bodies. Furthermore, incompetent or negligent practitioners continue operating irrespective of their bad performance record, compromised monitoring and oversight functions, institutional gaps, political directives, and unassigned mandate to plan, coordinate and implement strategic projects of national importance (including emergencies).

5.3.2 Force Account Mechanism

The government of Uganda adopted the Force Account mechanism in 2011 as a means of maintaining both DUCARs and national roads. Force account refers to a situation where a public agency uses its own labour force and equipment or equipment of another public entity to execute construction works (MFPED- "Budget Monitoring and Accountability Unit" BMAU, 2015:1; PPDA Act 2003 as amended 2014, Sec 95A (2)). With Uganda's road sub sector, Force Account mechanism is applicable to the maintenance and rehabilitation of public roads (MFPED-BMAU, 2015:2). Conditions under which

UNRA or DUCAR agencies may use Force Account include, where the DA has the equipment and personnel to undertake the works, no contractor is willing to execute the works assignment, it is cheaper to use Force Account than procure a contractor, and during emergencies (PPDA Act 2003 as amended 2014, Sec 95A). Given that Force Account is a method of executing construction works but not a procurement method, any supplies used in executing a works assignment under Force Account must comply with the PPDA procurement requirements (Section 95A (3a) of the PPDA Act 2003).

In a move to enrich the country's capacity to execute road works through Force Account mechanism, the government has over time provided road equipment to DAs. For instance, the government purchased (from China in 2012, Japan in 2015 and 2017) and supplied road construction equipment to UNRA, Districts and Urban authorities for road maintenance. Largely, UNRA and KCCA utilise a combination of contracting out and Force Account (and less of road gangs) to maintain public roads, while DUCAR agencies use Force Account and road gangs (Odongo, 2017:3). For instance, UNRA spends 42% of the budget for road maintenance on Force Account operations, and the remaining 58% on contracting out (MoWT, 2015:68). It is submitted that such a trend undermines the Road Industry Council's medium and long-term strategy involving the private sector constructing and maintaining not less than 80% of Uganda's public roads.

Although Force Account minimises procurement delays, reduces construction unit costs, and creates jobs for locals to work as road gangs, equally this mechanism has had both policy gaps and implementation challenges for Uganda (MFPED-BMAU, 2015:3-4). The Force Account policy gaps relate to: lack of well standardised and streamlined guidelines, positions of headmen and overseers (for supervising road gangs' works) are not provided for in the public service structure, sharing of equipment is operationally inapplicable due to lack of enough equipment across DAs, and a delay to fix the problem of DAs recovering equipment costs (for those used by road gangs) from their wages. On the other hand, the Force Account implementation challenges are: inadequate equipment for both light and mechanised works, inadequately trained road equipment operators, failure to appreciate the role of road gangs by a number of local governments, and high labour turnover rate by road gangs because of low pay (e.g. about Ugx10,000 per day for a porter). Further challenges include the incomplete set of road equipment by DAs, use of light equipment for heavy works, poor road maintenance and accumulated backlog due to weak institutional capacities (e.g. lack of technical staff), inadequate funding for Force Account activities, and the use of road gangs for routine mechanised works instead of limiting them to routine manual works.

5.3.3 District Urban Community Access Roads

In line with Uganda's decentralisation agenda, Districts and Urban local governments are responsible for the development, rehabilitation and maintenance of public DUCARs countrywide (Local

Governments Act 1997 as amended 2015; Kumar, 2002:4; Mugabi, 2004). As a way of ensuring effective accountability and service delivery, District Road Committees (DRCs) were established in 2011 with an oversight role over planning and budgeting, and monitoring and evaluation of road project performances (Bogere *et al.*, 2014:14). Yet apart from KCCA, districts and urban centres continue to have the lowest absorption rate of funds, lowest road user satisfaction levels, and the worst road maintenance and development performance (Achola, 2016:10; URF, 2016:7).

Regarding the maintenance of District Urban Community Access Roads (DUCARs) network, road gangs are being engaged on a fixed wage per month (in a distribution of one man per 2 km for unpaved and 4 men per km for paved roads) to undertake routine manual works, while mechanised routine and periodic maintenance works are executed through Force Account (Odongo, 2017:3). Whereas maintenance of DUCARs has increasingly devolved to District and Urban authorities, largely and contrary to the Local Government Act, the MoWT over time conducts the actual rehabilitation and development of DUCARs (Wepener, Kruger, Botha & Tulya-Muhika, 2001:5). Notwithstanding the above facts, where the District and Urban authorities have capacity constraints, MoWT (including UNRA) are not precluded from supporting and directly participating in the maintenance and development of DUCAR roads (National Transport Master Plan 2008-2023:51).

5.3.4 Uganda National Roads Authority

UNRA is responsible for planning, designing, procuring, contracting and managing the maintenance and development of national roads and bridges, including axle load control, management of ferries that work as a link to the national road network, and protection of road reserves along the national road network from encroachers (UNRA Act, 2006; UNRA Regulations, 2017). The Authority reports through MoWT for planning and accountability purposes, and its operations must comply with UNRA's requirements (Act, Regulations, strategic plan) and those of MoWT (legislation and strategic plan), as well as the National Development Plan II, and the NTMP (2008-2023) which also covers the Transport Master Plan for Greater Kampala Metropolitan Area (GKMA), among others.

The Authority manages 519 bridges, 9 ferries and 20544 km national roads (representing 14% of the total road network, but carry 80% of the motorized road traffic) (Kagina, 2017; Odongo, 2017:3). As a result of the low funds absorption and overall poor road performance of Districts and Urban authorities, since 2009 the national road asset size has jumped from 11,000km to about 21,000km through reclassification of District and Urban roads into national roads (Odongo, 2017:5; Booth & Golooba-Mutebi, 2015:8). As such, national roads increased just by reclassification rather than construction of new roads (Raballand, Macchi, Merotto & Petracco, 2009:15). Unfortunately, the quality of reclassified roads hardly improves, as this method of increasing the national road network was/is never matched with the financial and other resource requirements. Optimistically though, in the next five years the

national road network quality may evenly improve, on condition that the planned investment funding for national roads upgrade of US$275m per F/Y from 2018/2019-2022/2023 (totalling US$1,375m) is made available and put to right use (NTMP/GKMA, 2008-2023:63).

Notwithstanding the limitation in the building of Greenfield roads, a number of road rehabilitations, reconstructions and expansions increased in both scale and quality. For instance, the paved national roads increased by 30.4% (from 3,264km to 4,257km) and their fair to good condition improved from 74% to 80% between F/Ys 2010/2011-2016/2017. Similarly, the fair to good condition of the unpaved national roads increased from 64% to 70% over the same period (MoWT, 2017:viii). Furthermore, the awarding by UNRA of 3 year maintenance contracts, as opposed to a 1 year contract, motivates the contractors to reduce the tender price for re-gravelling a kilometer of a road by about 50%, because of the increased amount of business involved (Booth & Golooba-Mutebi, 2015:10). Also, regardless of the additional bid evaluation funding involved, the Independent Parallel Bid Evaluation (IPBE) improved bid evaluation results and reduced the completion time of the evaluation exercises, which in turn "reduced the unit cost for constructing national roads from US$ 1 million per kilometre to US$ 700,000" (National Budget Speech FY 2013/2014:23).

On the negative side, between 2009 and 2015 UNRA had the highest number of road malpractice cases ever reported, which ranged from delayed contractor payment and land compensations, improper road designs (excessive or inadequate), completion delays and poorly constructed roads, cost overruns and road works quality complaints, high unit cost of construction, delayed commencement of planned road works, financial diversions and mismanagement, to applying different versions of 'General Specifications' for roads and bridges (OAG Report, 2010; Byaruhanga & Basheka, 2017:32; Ggoobi, 2016:11; Aluonzi, Oluka & Nduhura, 2016:550; URF, 2015). The emanation and escalation of such problems was due to weak procurement rules, improper monitoring and underfunding, late fund releases from the source, incompetence and understaffing, inadequate due diligence and contract management practices, connivance and unprofessionalism, corruption, and grossly incompetent and negligent contractors.

At a time when everything seemed volte-face at UNRA, a new Executive Director, Allen Kagina was appointed around mid-2015 to restructure, transform and restore the institution to a path of developing and maintaining a cost effective, safe and sustainable national road network. According to an interview extract from the Online New Vision of 27th June 2017, Kagina highlights achievements and challenges of the Authority, 2 years after assuming office, as summarised in table 5.1 below.

Table 5.1. Achievements and Challenges of UNRA from 2015-2017

Achievements	challenges
Staff establishment increased from 1000 to 1740 employees	Procurement delays due to unjustified administrative reviews and long evaluation processes
Created a Construction Unit with equipment and professional staff	Missed synergies because of weak teamwork and slow decision-making
Improved stakeholders' engagements with local Governments, property affected persons, parliamentarians, the media, Development Partners, service providers and Civil Society Organizations	Low staff productivity due to capacity issues or incompetence which have impacted on procurement and project completion time
Improved in house design and feasibility study capacities that have improved the quality of road designs and reduced costs	Poor contract management leading to project suspensions and cancellations especially by donors
A replacement of inefficient and corrupt consultants with in house land acquisition capacity	Inadequate resources for transport and other logistical support
Reduced legal service costs and improved court case outcomes as outsourced law firms are replaced with in house legal teams	Poor performance of most contractors due to failure to mobilise personnel and equipment
Adoption of a modern IT payment system that reduces payment delays for service providers	Unsustainable unit cost of construction being above US$1 million per kilometer for some projects
Zero tolerance to insider trading and corruption in procurement processes	Very few new road projects being procured because of budget constraints
Developed Regulations for operationalizing the UNRA Act 2006 (came out, 31st August 2017)	Negative organisation publicity and delays in providing feedback to both internal and external stakeholders
Improved social and environmental safeguards on road projects	

Source: Modified from the New Vision [Online] 2017

Relatedly, a recent study on contractor monitoring and performance of road projects in Uganda, singles out lack of a strong internal project monitoring and evaluation mechanism in UNRA (Byaruhanga & Basheka, 2017:30). In conclusion, with the rate of success attained in the last 10 years, UNRA must scale up its efforts like never before in order to deliver on its promise of "great roads (with first class 20,000km of national road network) and great user experience by 2025".

5.3.5 Uganda Road Fund

With the ultimate goal of having well maintained public roads at all times, the URF finances routine and periodic road maintenance, and advises on the preparation and implementation of an effective and efficient annual road maintenance programme, as well as on the controlling of vehicle overloading (URF Act, 2008, Sec 6). Apart from emergency works approved by the URF Board, other road maintenance funds disbursements to DAs must be based on the approved annual road maintenance expenditure programme (URF 2008 Act, sec 29(1)). According to Odongo (2017:1), emergencies are unplanned and urgent maintenance works (caused by severe weather, accidents, floods, etc.).

Designated agencies that receive funds from the URF for road maintenance activities are UNRA, KCCA, 121 Districts, 41 Municipalities, 214 Town councils, and 1155 Sub counties. Table 5.2 below, illustrates road maintenance activities funded by URF.

Table 5.2. Matching Road Maintenance Categories with Maintenance Activities

Maintenance Categories	Activities
Routine Manual	Drainage works, culvert cleaning, grass cutting and debris removal
Routine mechanised	Pothole patching, grading, spot regravelling and drainage works
Periodic	Sealing, shoulder regravelling, shoulder sealing, major drainage works, edge repairs, regravelling, grading
Road safety	Erection of sign posts, treatment of black spots, installation of foot bridges, realignment
Bridge	Concrete repairs, steel repairs/painting, signage, element replacements, embankment reconstruction, guard rail repairs, clearance of river channels to aid water flow

Source: Modified from OAG Report (2015d: 18)

In addition to funding the maintenance activities in table 5.2 above, the URF financially supports UNRA's operational expenses for ferries and weighbridges, as well as repairs for plant and equipment, and purchase of road materials for road maintenance by DAs (URF Annual Report, 2011/2012: v; URF, 2017), among others. Based on the purpose for the release of road maintenance funds, implementing entities through DAs must provide quarterly accountabilities on the physical and financial progress of road maintenance activities to URF (OAG Report**,** 2015d: 18). In fact, several other institutions complement the financing, monitoring and evaluation functions of URF, as described in figure 5.3 below.

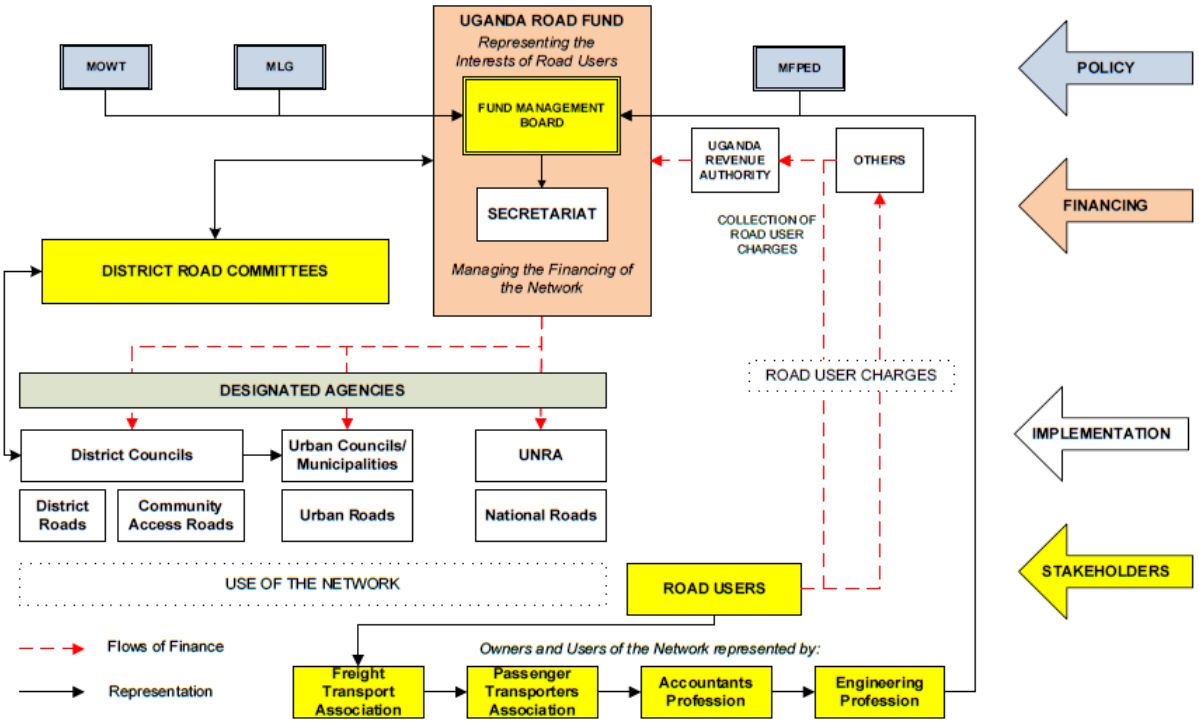


Figure 5.3. Institutional Relationship with Uganda Road Fund

Source: URF Annual Report (2011/2012:5)

URF reports through MoWT (in consultation with MoLGs and MFPED) for road maintenance planning and implementation outcomes, while the overall operations accountabilities and policy oversight of URF is under the mandate of MFPED. Designated agencies receive road maintenance funds annually from the URF based on the condition of the roads, maintenance requirements, the length of the road network and traffic volume, using an approved maintenance management tool (URF Act, 2008, sec 22(2)). The Uganda Revenue Authority (URA) and a few other organisations (e.g. Uganda Police, KCCA and Local governments) collect road user charges. Although road user charges (fuel levies, international transit fees for inbound vehicles, road licence fees, bridges and road tolls, weight distance charges, axle load fines) should be the main source of financing road maintenance, other sources may include donations, funds appropriated by parliament, grants, fees from drivers' permits, and traffic and road Safety fines (URF Act, 2008, sec 21(1).

The achievements of the URF since its inauguration in 2009 range from physical and financial performance, to systems and capacity creation. Physical and financial successes include: Roads maintenance financing reduced the roads in poor condition by about 10% and 5% in F/Ys 2014/2015 and 2015/2016 respectively (URF Annual Report, 2014/2015: vii; URF Annual Report, 2015/2016:ix). Furthermore, funding for road maintenance increased by 284.8% (from UGX 111.242 to UGX 418 bn) between F/Y 2009/2010 and 2014/2015, although it later stagnated at around UGX 417 bn between

2015/2016-2017/2018 (URF Annual Reports F/Ys 2011/2012-2017/2018; MFPED, 2010:177). Also, funds absorption for road maintenance by DAs has substantially improved over time (e.g. from 0% in F/Y 2011/2012 to 120.7% in F/Y 2014/2015 by KCCA, and from 59.3% to 85.9% by DUCARS for the same period) (URF Annual Reports 2011/2012 & 2015/2016). The URF on average annually disburses 99%, and occasionally 100% (e.g. F/Ys 2011/2012, 2013/2014, 2014/2015) of the money received from the Treasury to DAs for road maintenance.

Furthermore, systems developed and which continue to be improved include; regulations, manuals, guidelines, computerized road maintenance management and monitoring system, standardised funds allocation formula, road user charges collection and management framework, risk register and risk management framework, and the unit costs of road maintenance harmonization frameworks. Additionally, compulsory performance agreements (with clear KPIs) were introduced, and are signed between the URF and a designated agency every time and before the release of road maintenance funds (URF, 2015). As for capacity building, the URF conducts training on force account application and specialised trainings (for accountants, engineers and auditors) to DAs, regularly undertakes research in road works and conducts Road User Satisfaction Surveys (RUSS), as well as regularly monitors and evaluates road maintenance performance through inspections, reviews, audits and follow-ups (URF Annual Reports, 2011/2012-2015/2016). These have not only improved road quality but also planning and budgeting, road maintenance capacity and funds utilisation, reporting and accountability, and compliance with policies and regulations.

Notwithstanding the numerous transformations mentioned above, a VFM Audit undertaken on municipalities to ascertain the efficiency of the road maintenance systems in Uganda, covering 3 F/Ys (2011/2012, 2012/2013, 2013/2014) reveals the following:

- cost estimates for the maintenance works were never based on the recommended unit cost or URF guidelines, and, as such, actually deviated from the recommended unit costs by 395% to over 100,000% for routine mechanised maintenance in Municipal Councils (OAG Report, 2015d:23);
- a number of agencies never planned for routine maintenance in the three financial years audited;
- major variations in unit costs for similar interventions across the municipalities that could not be explained by topography and climatic differences;
- the formula used in allocating funds never considered the critical maintenance factors of length of road network, road condition and traffic volume; and
- Municipalities provide inaccurate data to URF due to a weak monitoring and evaluation system (OAG Report, 2015d:38).

Other road maintenance challenges include "persistent weak institutional capacities of DAs to plan and deliver road works in time; weak oversight by District Road Committees (DRCs); extreme deterioration of some sections of the public road network; grey areas in force account policy implementation; poor coordination of agencies funding road maintenance; poor reporting and accountability of DAs; misuse and abuse of funds by DAs; slow procurement of periodic maintenance projects, and lack of total quality management systems by DAs and outdated classification of the road network"(URF Annual Report, 2015/2016:58&59).

According to monitoring research on the effectiveness of road maintenance programmes undertaken on selected UNRA stations and DAs covering the first three quarters of F/Y 2014/2015, it is suggested that DAs perform better at financial than physical infrastructure performance, and also, national roads perform better than DUCARs in both financial and physical performance (see table 5.3 below).

Table 5.3. Agency/Road Category by Performance Rating

Agency	Performance Rating (%)			
	Physical performance	Financial performance	Overall performance	Performance Category
UNRA (National roads)	**61.7%**	**96.4%**	**79.1%**	**Good**
DUCAR Agencies (DUCARs)	**59.96 %**	**73.68%**	**66.82%**	**Fair**

Source: Modified from URF (2015: v)

Despite a moderate physical performance observed in F/Y 2014/2015 (as depicted in table 5.3 above) that merited future improvement, the road physical performance of the combined routine and periodic maintenance of DAs instead declined by about 8.6% in F/Y 2015/2016 (URF Annual Report, 2015/2016:62).

In fact, over 95% of the road maintenance problems underscored in the previous paragraphs arose because of "inadequate road maintenance financing". Yet, if the government can operationally permit the URF to receive road user chargers directly from the collectors on a monthly basis (as envisaged in section 21(3) of the URF Act 2008), it would not only solve the late releases and inadequate funding from the consolidated fund, but would also drastically reduce road maintenance backlogs in the medium and long-term. Realistically, the annual road maintenance funding is not proportionate to the collected annual road user fees. A case in point is the fuel levies collected in the F/Y 2009/2010 and 2010/2011 being approximately 501.9% and 548.9% respectively, higher than the annual budgets for road maintenance, as shown in table 5.4 below.

Table 5.4. Approved Budgets for Road Maintenance VS the Total Fuel Levies

Financial Year	**2009/2010**	**2010/2011**
Total fuel levies (petrol & diesel)	UGX. 699.7 bn	UGX.801.1 bn
Approved budget for road maintenance	UGX.116.24 bn	UGX. 283.88 bn

Source: Modified from Achola (2016:6)

Suffice to say, the writer concurs with the reiterations of URF Annual Reports (from 2010/2011-2015/2016), Achola (2016:12), and OAG (2016:359) that, unless section 14 of the URA Act 1991 is amended to allow the remitting of road user fees directly to the URF (but not to the Consolidated Fund) through its account with Bank of Uganda (BOU), the road maintenance financing gap will continue to increase, and so will the road deterioration conditions.

5.3.6 Transport Sector Development Program (TSDP) and CrossRoads Programmes

The TSDP and CrossRoads were distinct programmes that teamed up between 2011 and 2015 to facilitate efficient government expenditure on roads through sustainable road network processes and systems. The World Bank and European Union (EU) funded the TSDP to improve the capacity of public institutions in managing the road network, while the UK Department for International Development (DFID) funded the CrossRoads programme to improve the capability and competition in the road sub sector. Although the CrossRoads team was not executing TSDP, it was however responsible for receiving reports from TSDP, and thereafter to provide accountability on the progress of the two programmes to the stakeholders (CrossRoads Report, 2011:16).

Prior to the commencement of the two programmes, a number of organisations were established, and subsequently got involved in the transformational processes. These included representations from the public sector (the Reformed MoWT, UNRA, URF), civil society organisations (URSSI), and professional and private sector bodies (Engineers Registration Board-ERB, RIC, UACE, UIPE, UNABCEC). However, most of these organisations, if not all, were in their infancy stages and with many operational capacity limitations.

Based on the road network quality problem analysis conducted at the start of the programme, some support was extended as the implementation progressed, as shown in figure 5.4 below.

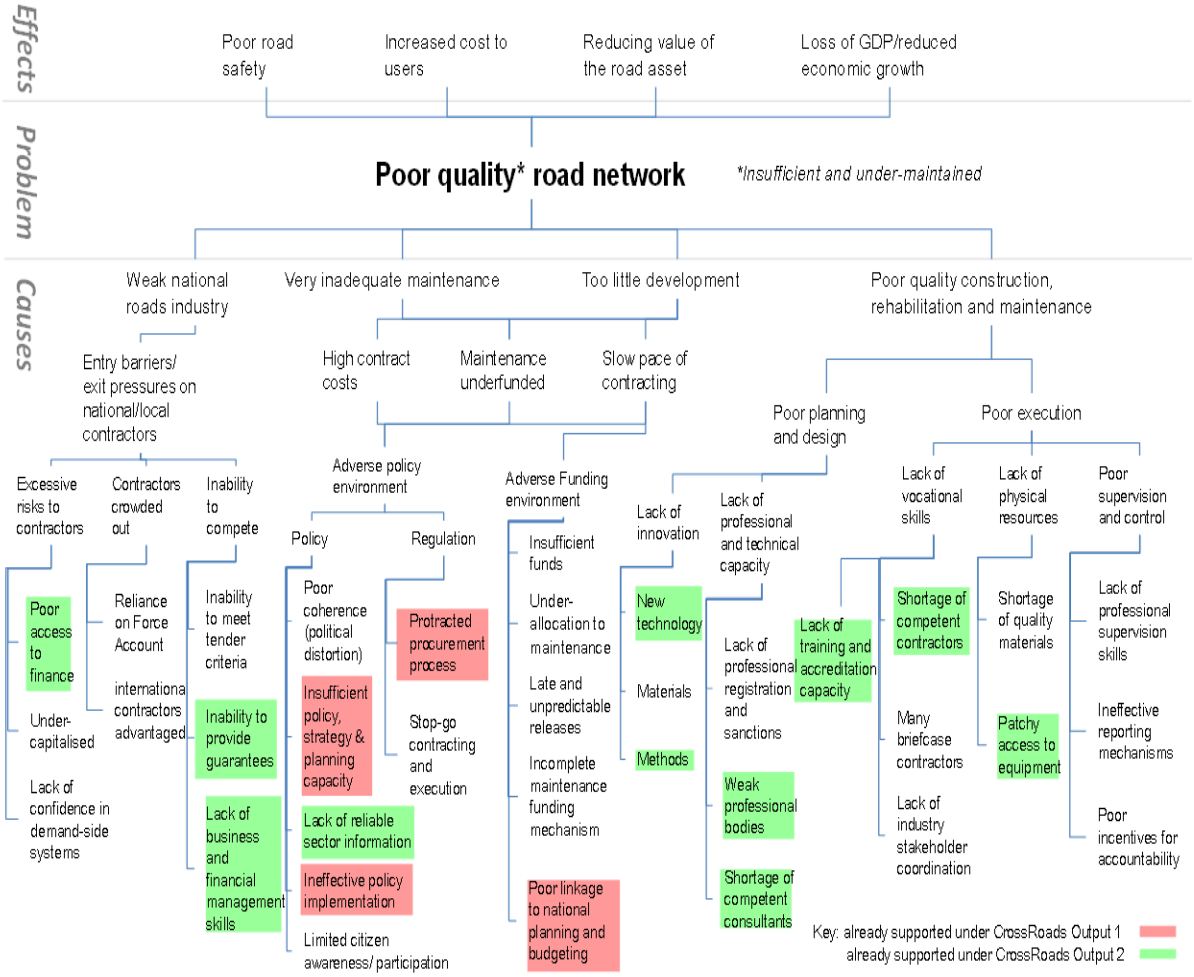


Figure 5.4. TSDP and CrossRoads support against Road Network Quality Problems

Source: CrossRoads Report (2013:19)

Note: Red (output 1) and green (output 2) colours as denoted in figure 5.3.6.1 above, respectively represent areas that were supported to improve the capacity of public institutions, and the capability and competition in the road sub sector. According to Booth and Golooba-Mutebi (2015:8-11) interventions that had positive outcomes, among others, are:

- A Construction Guarantee Fund that offered financial guarantees to banks for construction firms to meet bid and performance bond requirements;
- An Independent Parallel bid evaluation that improved UNRA's procurement evaluation outcomes and reduced administrative review cases;
- Business skills trainings that improved staffing, and equipment accessibility and management for local firms;
- Business collaborations from international professionals improved consulting services for local engineers;

- Promoting the undertaking of road works, more by the private sector than government, increased market competition and resulted in reduced unit costs of construction;
- Conducting and dissemination of Road User Satisfaction Surveys (RUSS) outcomes reduced accidents and improved road safety.

Although many other interventions were undertaken, contrary to the targets, the programmes ended without setting up a National Road Safety Authority (NRSA), a Multimodal Transport Regulatory Authority (MTRA), a District, Urban and Community Access Roads (DUCAR) Authority, and developing a National Construction Industry legislation that would have led to the creation of the Uganda Construction Industry Commission (UCICO). Booth and Golooba-Mutebi (2015:9) attributed the above failures to resistance and unpredictable government behaviour, most local firms preferring an individualistic rather than a collaborative team approach to business, and weak and low membership of industry associations and professional bodies to assertively demand for enactment and enforcement of industry laws and standards.

In summary, it is noted that the CrossRoads programme achieved more success than TSDP. However, some of the achievements of the programmes have and continue to raise unsustainability concerns, because of the argument that, due to financing constraints, IPBEs and a Construction Guarantee Fund seem to have ended with the closure of the two programmes. Last but not least, as the economy continues to go through a meltdown (e.g. increasing inflation and foreign exchange rates), unit costs for construction works will continue increasing rather than reducing. Finally, the adoption and preference of the government of maintaining roads through Force Account mechanism, shifts a reasonable percentage of road works from the private sector back to public institutions.

5.4 THE STATE OF ROADS AND ROAD SUB SECTOR PHYSICAL PERFORMANCE

The section discusses the stock and condition of roads, the physical performance trend and user perceptions on the level of development of the roads in Uganda. Subsection 5.4.1 presents the state of public roads in the country, while sub section 5.4.2 discusses the physical performance of the sector, including user perceptions on the efficiency of road facilities and services in Uganda.

5.4.1 The State of Public Roads in Uganda

According to Odongo (2017:1), a road is a long narrow stretch with a prepared smoothed (unpaved) or paved surface built for passage of vehicles, people and animals. By national standards, a paved road is bitumen (tarmac) surfaced, while the unpaved road is gravel (Murram) or earth surfaced. The estimated total public road network for Uganda is 146,110km, of which 20,544km are national roads (4,257km paved and 16,388km unpaved). The urban roads consist of approximately 12,000km; 2,110km being

KCCA roads (580km paved and 1,520 unpaved), while the remaining 9890km belong to municipal and town councils. The district and community access roads consist of about 35,566km and 78,000kms respectively, and all the district roads are gravel surfaced, while the community access roads are earth surfaced.

Like national roads, the unpaved urban roads are much higher in number than the paved urban roads, even though public sector road agencies lack an updated record on paved and unpaved roads for the municipal and town councils. The estimated replacement value for Uganda's road network is US$ 6.2bn (an equivalent of 24% of Uganda's GDP) (Odongo, 2017:1). Meanwhile, the road maintenance backlog is estimated at US$ 1.25 bn (equivalent to 51,000km of the total road network), 7000km being national roads, 700km KCCA roads, 2000km municipality roads, 3500km town council roads, 8000km district roads, and 30500km community access roads (Odongo, 2017:3).

5.4.2 The Road Sub Sector Performance

Whereas the paved national road network stock increased by 67.54% (from 2,875.6km to 4,257km) between F/Y 2007/2008-2016/2017, the country's total paved road network, however, is just a paltry 3.52% of the total public road network (Kagina, 2017). The implication is that over 96.48% of the total road network in the country is unpaved. Plotting the kilometres of the total paved road network against the total road network of a country, Uganda has the lowest percentage of paved roads regionally. For instance, Kenya scores 6.95%, Tanzania 8.20% and Rwanda 19.0% (Kagina, 2017). Generally, the condition of the road network in Uganda is improving quite sluggishly, when the aim is for the country to have 80% of total road network paved by 2040 (Vision 2040:14; MoWT ASPR, 2016/2017:23). According to the MoWT Annual Sector Performance Report (ASPR), (2016/2017:21) road condition is the roughness or unevenness of a road structure. Road roughness refers to road surface characteristics that influence the ride/drive quality, travel time and speed, road safety, fuel consumption, wear and tear of the vehicle, and road maintenance costs. As such, an increase in the road surface roughness can be caused by gradual structural surface deterioration, cracking, rutting, potholes, climate effects (Radovic, Jokanovic, Matic & Seslija, 2016:883), and vehicle overloading or using heavyweight trucks on roads purposely constructed for lightweight vehicles.

Based on the International Roughness Index (IRI) measured in m/km; IRI $\leq$3.0 = Good, IRI>3.0$\geq$5.0=Fair, IRI>5.0 = Poor for paved roads; and IRI$\leq$6.0 = Good, IRI$\geq$6.0$\leq$8.0 = Fair, IRI>8.0 = poor for the unpaved roads; and using the MoWT road condition rating scale (fair-good, and poor) adopted in 2011, table 5.5 below shows an improvement in the national roads condition between F/Y 2010/2011 and F/Y 2016/2017.

Table 5.5. The National Roads Condition between F/Y 2010/2011 and 2016/2017

	F/Y 2010/2011		F/Y 2016/2017	
National Road Type	**Fair-Good (%)**	**Poor (%)**	**Fair-Good (%)**	**Poor (%)**
Paved	74	26	80	20
Unpaved	64	36	70	30

Source: Modified from MoWT ASPR (2015/2016:xiii) and (2016/2017:21)

Cumulatively, the fair to good condition of paved roads increased by 6% and the poor condition reduced by the same percent, while the fair to good condition of the unpaved roads improved by 6% and the poor condition reduced by the same percentage as well. However, on average the improvement in the fair to good condition and reduction in poor condition for each of the road types was just 1% per year. Due to persistent poor road network condition (among other factors), the number of people dying because of fatal road accidents increased from 2954 in F/Y 2010/2011 to 3503 in F/Y 2016/2017. However, road fatalities reduced from 46 to 26 per 10,000 vehicles for the same period due to strict enforcement of road safety rules on national roads. Road safety enforcement (e.g. axle load control, Highway police patrols), in turn reduced vehicle overloading from 54% in 2011 to 3.7% in 2017 (MoWT ASPR, 2016/2017:29), as well as reduced speeding, driving under the influence of alcohol, reckless driving, and poor vehicle maintenance behaviour.

In 2016, the URF conducted a Road User Satisfaction Survey (RUSS) to establish road user perceptions on the quality of public roads infrastructure and services in Uganda. Using a rating scale ranging "from very satisfied, satisfied, dissatisfied to very dissatisfied" the findings suggest that 9% of the interviewees were *very dissatisfied*, 53.7% *dissatisfied*, 32.5% *satisfied*, and 4.8% *very satisfied*. This indicates that on average 62.7% of the road users are dissatisfied and only 37.3% are satisfied with the condition of the road network facilities and services in the country (see figure 5.5 below). The cause of a high dissatisfaction levels was because of narrow roads, potholes, poor drainage, infrequent road maintenance, dusty roads, poor road signs/markings, lack of pedestrian pathways along the motorways, bad driving, overloading of vehicles, high road congestion, road robberies, illegal parking, insufficient safe crossings, and small roundabouts. Figure 5.5 below shows the top 10 causes of road user dissatisfaction with the corresponding percentage response rate for each factor.

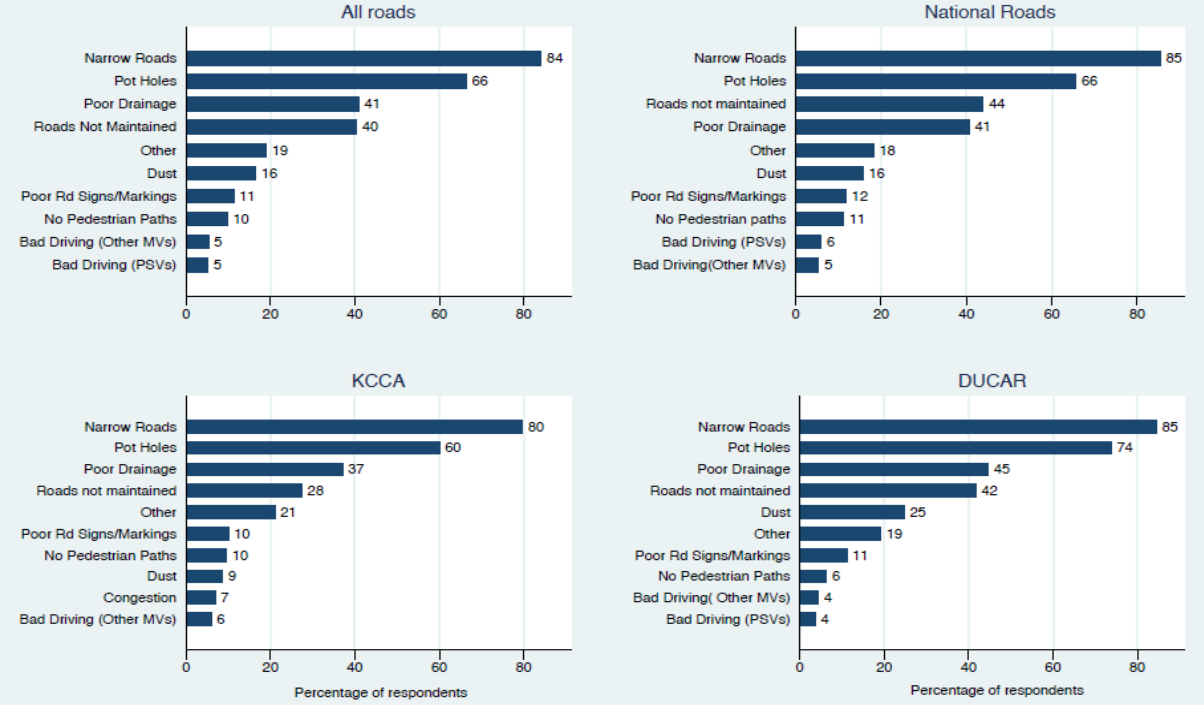


Figure 5.5. Top Causes of Road User Dissatisfaction with Public Roads in Uganda

Source: Uganda Road Fund (2016:24)

In addition, across all four regions (Central, Western, Eastern, Northern, including Kampala city) of Uganda, high dissatisfaction levels about the narrowness of the roads, presence of potholes, poor drainage and inadequate road maintenance was recorded (URF, 2016:24). Furthermore, the results of the study indicated high road user complaints about narrow roads and presence of potholes on both paved and unpaved roads (URF, 2016:23). Whereas poor drainage and dust were more pronounced on unpaved roads, inadequate maintenance and high road congestion were more reported on paved roads (URF, 2016:23). Unique to roads in Kampala city (whether national or KCCA classified) and a few inlet and outlet roads to the capital city, was the problem of road congestion/traffic. Evidently, the average vehicle travel time stood at 2.9 min/km in 2017 (from 2.4 min/km in 2014), compared to the 2017 countrywide vehicle travel time average of 2.02 min/km (Odongo, 2017:3).

Although the 2016 RUSS was a replica of the 2015 RUSS conducted by CrossRoads, the results indicate that road user dissatisfaction increased by 15.9% (from 46.8% to 62.7%) in the span of just one year (URF, 2016:21). Taking Uganda's road network as a whole, the general and key priorities for road agencies to improve the public road network (in their order of importance as suggested by the road users) include widening of roads, tarmacking roads, better road maintenance, improving road safety, improving drainage systems, filling of potholes, and constructing more roads (URF, 2016:43). This is in addition to constructing long lasting roads, creating pedestrian pathways, reducing corruption,

enforcing traffic rules, installing and repairing traffic lights, reducing dust, reducing speed humps, improving security on roads especially at night, and providing better public transport (URF, 2016:43).

5.5 A DESCRIPTION OF THE PIONEER PUBLIC PRIVATE PARTNERSHIP ROAD PROJECTS FOR UGANDA

This section provides a brief description of the planned or ongoing PPP road project constructions (which are the first of their kind in the country). The Ugandan government is undertaking massive PPP road projects in order to decongest Kampala by reducing traffic jams in and around the city, as well as improving the condition of the road network in the city and along the main international border routes of the Northern and Southern corridors. Kampala is the country's capital city and commercial town, with an estimated 1,353,189 people. Figure 5.6 below locates the current PPP road priority projects along Kampala capital city.

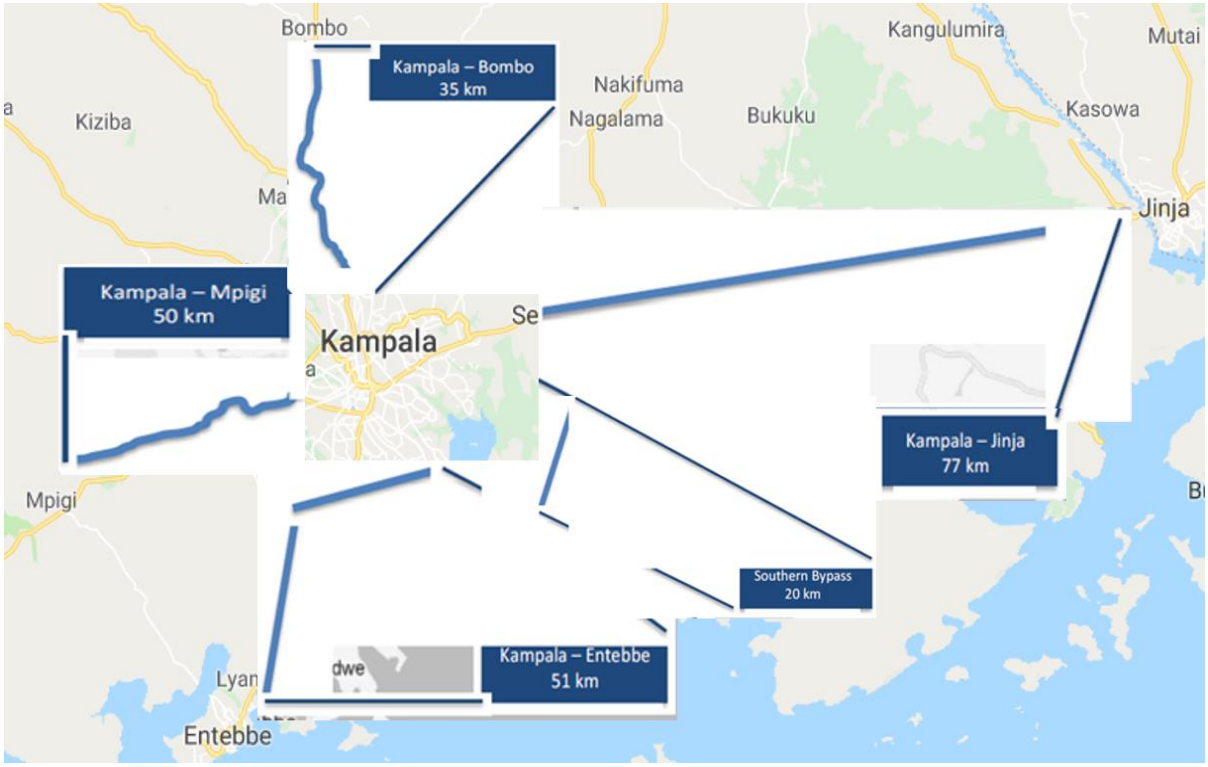


Figure 5.6. A Map Showing Planned and Under Construction Public Private Partnership Road Projects in Uganda

Source: Modified from Van den Broek (2013:8)

Given that there is no published work on PPP road projects in Uganda, the presentations in this section are based on two UNRA documents by Kagina (2017) and Van den Broek (2013). As per Figure 5.6 above, below is a brief description for each of the proposed PPP road projects.

5.5.1 The Kampala-Entebbe Expressway

The Kampala-Entebbe Expressway (KEE) is a 51km 4-lane dual carriage toll road running from Kampala city to Entebbe International Airport, with a spur connecting Munyonyo through Lweza to the new Kampala-Entebbe Expressway (KEE). The Expressway has two stretches - the 37.23 km road (from Northern Bypass at Busega to Abayita Ababiri) connecting with the existing Kampala Entebbe road (KER), and the 14.13 km spur road (from Munyonyo to Lweza) connecting with the new KEE. The KEE is a DBOM project, but with the Design-Build contract independent of the Operate and Maintain contract. A Design and Build contract was signed between UNRA and the China Construction and Communications Company Limited (CCCC) in 2011, and the Operate and Maintain contract will ideally be signed with a different private company after construction is complete, but before the road is officially open for use. The DB cost of the project is about US$ 476m, and the Government of Uganda finances US$ 127 of the project, while EXIM Bank of China contributes a US$ 350 concession loan (at a 2% interest rate). The road user fees from the expressway will be used for loan repayment to EXIM Bank and for road maintenance.

5.5.2 Kampala Jinja Expressway

The new Kampala Jinja Expressway (KJE) is largely a 4-lane (with a few 4+4 or 3+3 lanes) dual carriage toll road to the south of the existing Kampala Jinja Road (KJR). KJE will cover 77km of road starting from Lugogo bypass at Nakawa in Kampala (branch off from Kyambogo junction, via Kinawataka, between Mbuya and Kireka to Butabika) to the new Nile Bridge at Njeru in Jinja. The KJE project is a 25 years BOT contract (excluding design and construction time) at an estimated cost of US$ 1.1bn, and will be constructed in 2 phases. The first phase covers 33km (from Kampala to Namataba), and the second phase covers 44km (from Namataba to Jinja). The Government of Uganda, development partners and private companies will fund the project.

5.5.3 Kampala Mpigi Expressway

Kampala Mpigi Expressway (KPE) will be an expansion of 34 km (estimated cost of US$151) to a 4-lane dual carriage aligned to the exiting 50 km stretch on the Kampala and Masaka road, starting from Busega to Kyengera, Nabbingo, Kitemu, Nsangi, Maya, Nakirebe, Katende, Kavule trading centers and Mpigi town. The project will be executed either as BOT (Toll) or BOT (Annuity) at an estimated cost of US$ 460m. The expressway is anticipated to reduce travel time between Busega and Mpigi from the current one hour to 20 minutes (National Budget, FY 2017/2018:16).

5.5.4 The Southern Bypass Expressway

The Southern Bypass Expressway (SPE) will be a 4 lane dual carriage covering approximately 20km of a new standard route, providing a complete Bypass for the southern zone of Kampala City. The expressway will run from Butabika (at a junction of KJE) via Luzira, Kyeyitabya and connects with the KEE spur road in Munyonyo. The project may be executed as BOT (Toll) or BOT (Annuity) contract for a period of 25 years (excluding the construction time) at an estimated cost of US$ 1100m.

5.5.5 Kampala Bombo Expressway

The Kampala Bombo expressway (KBE) will be an expansion of a 35km (estimated cost of US$175m) of the existing road stretch between Kampala and Bombo to a 4-lane dual carriage, which connects with the towns of Luwero, Masindi, Kigumba, Arua and to the Democratic Republic of Congo and South Sudan. The project will be executed either as BOT (Toll) or BOT (Annuity) at an estimated cost of US$ 460m.

5.5.6 Kampala Outer Beltway

Although not captured in figure 5.6 above, the Kampala Outer Beltway (KOB), also referred to as the Kampala Ring Road (KRR), forms a full circle around Kampala city. It is approximately 16kms East of Kampala city, and covers a total of 100km of road. The proposed ring road starts from Seeta in Mukono Town on the KJE, turns north to Bukeerere in Mukono District, then moves west via Namugongo, Kira, Kasangati, Matugga, Wakiso, Buloba to Nsangi on KPE. At Nsangi, the beltway will connect with KEE via Kajjansi to Munyonyo, and from Munyonyo via the SBE back to KJE.

Finally, other PPP road projects being planned in and around the Kampala city include: Kampala Flyover, a 50km Kampala Busunju Expressway (KBUE), a 5km Very Very Important persons (VVIP) Expressway, and the ongoing expansion of the Northern Bypass to 4-lane dual carriage. Note that the nature of particulars for the PPP projects described above vary because of the differences in the progress level of planning or implementation for each project.

5.6 CHAPTER SUMMARY

The road sub sector uses more government funding than development partner funding. While road development relies on both development partner and government funds, road maintenance only uses government funding (Odongo, 2017:5). Although the annual financial contribution for road development and maintenance remains too small to have a significant impact on road improvement, the absorption of funds by DAs has improved to an acceptable level (between 80% and 99%) except for DUCAR (excluding KCCA) agencies which average below 60% but above 50%. Consequently, the

road sub sector enormously contributes to the improved financial and physical performance of the sector as a whole. For instance, budget sector performance improved from 74.3% in F/Y 2015/2016 to 89.5% in 2016/2017. Regarding physical performance, in F/Y 2016/2017 a total of 310km (77.5% achievement) out of the planned 400km, compared to a total of 176km (68.5% achievement) of the planned 332.2km in 2015/2016 were upgraded from gravel road to bitumen standard respectively (MoWT ASPR, 2016/2017:67; MoWT, 2015/2016:90).

As Samson Bagonza (the Engineer in Chief at MoWT) noted, in addition to scheduled routine and periodic maintenance, "roads need rehabilitation and reconstruction after every 7 and 15 years respectively" (Patriot Magazine, 2017:22). However, limited financing coupled with outmoded road maintenance and development practices impede road quality in Uganda (Odongo, 2017:4). For instance, only 0.55% of the GDP is spent on road maintenance, instead of the recommended 0.85% (Odongo, 2017:9). The bigger problem of Uganda, like most of the African countries, is preference for road development over maintenance during funds allocations. Yet no road network can significantly improve while treating road development and maintenance exclusive of the other, and without adequate funding for all of them. While the Force Account mechanism can contribute to arresting Uganda's road deterioration problem in the long run, overreliance on it, however, undermines the development of a strong and competitive private sector for the construction industry (RIC, 2014:1).

Notwithstanding the road reform successes achieved so far, the inflexible and bureaucratic government practices largely continue to have a bearing on the commercialisation and performance of road agencies. For instance, since 2008 the URF operates like a "first generation Fund" instead of a "second generation Fund", even when it meets the requirements to operate as such. A first generation Road Fund is characterised by "no oversight Board, weak legal base, earmarked revenues but not linked to road use, the road maintenance fund is managed by the national road agency, no published financial rules and regulations, and is not subjected to independent technical and financial audits" (Heggie & Vickers, 1998). As such, URF continues to receive piecemeal road maintenance funds from the national budget on an annual basis. Furthermore, until 2017 (for over 10 years) UNRA developed and maintained national roads using the UNRA Act 2006 that had no regulations. As a rejoinder, the writer concurs with the assertion that, "the ineffectiveness of the regulators is a reflection of the shortcomings of the laws that establish the institutions and define their mandates. A combination of laws that do not empower institutions to act and a narrow scope of mandate render them even weaker" (OAG Report, 2015:2).

Finally, it is observed that the planned PPP roads have improved features (e.g. underpasses, overpasses, bridges, interchanges, viaducts, Greenfields) and all roads sections are 4-lane (or more on some sections) dual carriage, compared to the existing ordinary roads which are 2-lane single carriage. On the other hand though, since 2011 the PPP road projects have remained at the planning stage, with

hardly any project completing the planning phase or commencing construction, except for the KEE (a mere Design and build contract whose construction got completed in June 2018), with plans of making the operation and maintenance of the road a real PPP. Although there is willingness to pursue road development through PPP mechanisms, there seems to be a general lack of readiness that continues to haunt planning and implementation processes.

6 CHAPTER 6: LEGAL AND POLICY FRAMEWORKS APPLICABLE TO PUBLIC PRIVATE PARTNERSHIP ROAD PROJECTS IN UGANDA

6.1 INTRODUCTION

Road development is a central function of a responsible government (s) (fifth Schedule, article 178 (9b), and sixth schedule, article 189 (16A) of the Constitution of the Republic of Uganda, 1995 as amended 2005). The same Constitution (Pg.17 ix-x), provides for PPPs under the auspices of government having the mandate to support private sector initiatives and self-reliance, and the involvement of people in the formulation and implementation of development plans and programmes that affect their welfare. Furthermore, the government must prioritize the enactment of laws that protect people's rights and enable the extension of equal and balanced development opportunities to the populace across regions, and between rural and urban areas (The Constitution of the Republic of Uganda, 1995:17 xi-xii, as amended 2005). In fact, there is global consensus about existence of sound legislation before the implementation of any intervention being the number one best practice.

This chapter provides a discussion of the existing legal and policy frameworks that support the planning and implementation of PPP investment projects and programs in Uganda. The chapter covers pure PPP legal and policy frameworks, and other legal and policy frameworks (which are road specific or generic in nature) that support PPP arrangements.

6.2 PUBLIC PRIVATE PARTNERSHIP LEGAL AND POLICY FRAMEWORKS CUTTING ACROSS SECTORS

This section discusses the applicability of the PPP policy and Act (including the responsibilities of key stakeholders), as well as the PPP process, that are intended to enhance effective PPP outcomes.

6.2.1 Public Private Partnership Policy 2010

The PPP policy provides an environment that enables the public and private sectors to closely work together for improved public service delivery (Republic of Uganda, 2010:5). Unlike in the past, the private sector is now at the forefront of providing public infrastructure and related services. Among others, the policy proposed establishment of the PPP Act and institutional frameworks, issuing of regulations and operating guidelines, standardization of PPP processes and documentation, and instituting capacity building programmes. In effect, this move not only empowers public agencies and departments with skills to effectively assess projects, identify the suitable private partners, negotiate

and craft good contracts, and monitor and evaluate their implementation, but also removes ambiguity in the allocation of roles and execution of stakeholders' responsibilities, and protects both the public and private entities from indiscriminate application of the PPP law. The policy, therefore, signals the government's renewed commitment towards increased private sector participation and investment in public infrastructure and related services with the intention of accelerating public investment to meet the ever increasing and evolving public needs through value for money practices, streamlined PPP procurement and accountability processes, and with private sector working practices that are more effective and less bureaucratic.

The PPP policy is applicable to all public entities that are directly tasked with the provision of public services (for example, government ministries, autonomous government departments, Local Authorities and Statutory bodies), as long as the PPP projects being undertaken fall within the public entity's mandate, and also meet the country's medium or long term overall economic and social development objectives and priorities (Republic of Uganda, 2010:4). For a project to qualify as a PPP, a detailed feasibility study should have been carried out and its results must demonstrate that: delivering the project as a PPP provides a higher value for money outcome compared to conventional procurement; long term affordability of the government/citizens and willingness and capacity of private parties and other stakeholders has been ascertained; and, that private sector provisioning should provide a better balance of economic and social benefits and costs over public sector provisioning (Republic of Uganda, 2010:7-8). In addition, the project scope in terms of capital or contract value must be big enough to ensure achieving of value for money, once the project is executed. However, with small but critical projects, the PPP policy recommends, where possible, the bundling or aggregating of similar projects together in order to attain the required PPP project size (Republic of Uganda, 2010:8).

Among the key requirements for PPP road projects are effective stakeholder consultation and public awareness about the understanding of PPP projects, the benefits and costs of each project, and allowing the input of all stakeholders (such as service users and their representatives, staff and their representative, employees and their Union representatives, public servants and the general public) in project development and implementation, as a mechanism of consensus building for wider PPP policy and project ownership (Republic of Uganda, 2010:10-11). Finally, like in any other part of the world, the policy clearly indicates that private financing under PPP arrangements is meant to complement public resources in the provision of public infrastructure and services, but not to replace the government's financial contribution, nor does it substitute conventional procurement (Republic of Uganda, 2010:4&7).

6.2.2 Public Private Partnership Act 2015

Irrespective of the sector of the economy, the PPP Act (Republic of Uganda, 2015a) applies to all PPP projects that fit with in Uganda's National Development Plan priorities (sec. 2). The projects must focus on developing public infrastructure or providing public services through: Concessions; Operation and maintenance agreements; Lease, develop and operate agreements; Build, own and maintain agreements; Build, own, operate and transfer agreements; Design, build, finance, and operate agreements; Build, own, and operate agreements; and any other PPP agreement prescribed by the Minister of Finance as per statutory instrument (Sec. 38-45). Although the contracting authority has the right to use one or a combination of any of the above mentioned PPP agreements for a single project, any choice to be made must consider the risk allocation, financing and operating impacts of each agreement type, and such decisions must be guided by the PPP Act's procedures and regulations (Sec 37). Among the critical operationalisation elements of the PPP Act is stakeholder management, and in the remaining part of this subsection a description and highlights of the responsibilities for the key PPP stakeholders in Uganda is provided, as per the PPP Act 2015.

6.2.2.1 Public Private Partnership Unit

The PPP Unit, is a unit in the Department of Project Analysis and Public Private Partnerships in the Ministry of Finance, and its responsibilities in broad terms are to provide technical, financial and legal expertise to both the PPP committee and project teams, and serve as the National PPP resource centre, the Secretariat and technical arm of the PPP committee (sec 11(1a&b)). In more specific terms, the PPP Unit: conducts civic education to promote PPP awareness and understanding, carries out capacity building and advises contracting authorities on PPP management processes; compiles and maintains an inventory of prospective PPP projects; maintains a record of all project documents; assists the PPP committee in formulating guidelines and standard documentation; institutes measures to eliminate constraints that limit project success; liaises and assists contracting authorities to implement their roles; and ensures procurement processes conform to the PPP Act and procurement best practices (sec 11(2)). Furthermore, the PPP Unit is responsible for: conducting research and gap analysis in order to continuously improve PPP implementation; collecting, analysing and disseminating information relating to PPP projects including contingent liabilities of the government; making recommendations to the PPP committee for action; developing open, transparent, efficient and equitable systems for managing PPP project process; and monitoring contingent liabilities and accounting and budgetary PPP issues within relevant offices in the Ministry of Finance (sec 11(2)).

6.2.2.2 Public Private Partnership Committee

The PPP Committee membership is a representation of both public and non-public officers. The public officers comprise of the Attorney General and permanent secretaries (from the ministries of Finance, Prime Minister's office, Lands, Local government) or their representatives, a representative from the National Planning Authority, and the Director of the PPP unit. Meanwhile, the non-public officers is a four persons team with a representation from the Private Sector Foundation, Uganda Investment Authority, the Academia, and a retired judge (Sec. 5). Although non-public officers serve on the committee for a term of five years subject to one term renewal, public officers' term of office does not have a time limit, since the terms and conditions of their service on the committee is at the discretion of the minister of finance in consultation with the public service commission (Sec. 5 (c) & 6). Furthermore, the non- public officers' team is required to have at least one-third of its representation from either gender (Sec. 5(b)), whereas the team of public officers is not mandated to be gender sensitive at all.

Among others, the committee is tasked to: formulate PPP policies; ensure that any PPP agreement complies with the PPP Act, and all the PPP projects meet the national priorities and PPP Policy stipulations; formulate standards, guidelines and procedures for contract awards and bid documents; examine and approve feasibility studies; approve the organisational structure for the PPP Unit; oversee monitoring and evaluation of projects; authorize allocations from the Project Development Facilitation Fund; approve project proposals, cause and approve fiscal and any other resource accountabilities required; and review legal, institutional and regulatory frameworks (Sec. 7). In addition, the committee has powers to establish subcommittees whenever the committee deems it necessary for better performance of its functions, and the committee can also co-opt into the membership of the subcommittees, persons with knowledge and skills necessary for effective performance of the subcommittees (Sec. 9). However, the committee is allowed to delegate, only in writing, any of its powers or functions to any subcommittee or to any member of the committee or agent when need arises (Sec. 8(3).

6.2.2.3 Contracting Authority

Contracting authority refers to a ministry, department of government or anybody established by government and mandated to carry out a public function (Sec. 4). The primary responsibility of the contracting authority is to identify, appraise, develop, procure and monitor PPP projects within its jurisdiction. Furthermore, the contracting authority must prepare periodic reports (Sec. 27 (2)), and may directly participate in the financing and implementation of the project. Although the PPP Act is explicit about the forms of participation in project financing by the contracting authority to be monetary contribution to project capital, concessioning the use of assets partially or fully, and assigning the

contracting authority's asset to another party to be operated and exploited for a specified duration, however, with the contracting authority's direct participation in project implementation, the PPP Act implicitly indicates that "the project invitation to tender" must define the form and level of engagement of the contracting authority (Sec. 12 (4)). Finally, the contracting authority or government have the right to borrow, guarantee or raise a loan for PPPs, only when such a decision has been approved by a resolution of parliament, and fulfils other prescriptions of Article 159 of the Constitution of the Republic of Uganda 1995 (as amended 2005) (sec. 12 (4)).

6.2.2.4 Accounting Officer

The accounting officer is "a person designated as such under the law, to perform the functions of the accounting officer of a contracting authority" (Sec. 4). The functions of the accounting officer include, among others: to solicit for a private party for a project, to appoint the project team and any other person required for the implementation of the project; signs a project agreement with the private party on behalf of the contracting authority; takes custody of a project agreement and monitors compliance with its terms and conditions; and protects any property of the contracting authority or government placed under the control of a private party from forfeiture, theft, loss, wastage or misuse (Sec. 13).

6.2.2.5 Project Officer

The project officer is the person appointed by the accounting officer to head and give direction to the project team in the execution of their project duties, manages the procurement and implementation of the project, and monitors the way the private party manages and executes project tasks (Sec. 14).

6.2.2.6 Project Teams

The project team should be composed of staff from the contracting authority, unless the required technical skills for the project are not available internally (Sec. 15 (3)). The projects teams are tasked with: identifying, screening, and prioritising projects; preparing projects; preparing and appraising the legal, regulatory, social, economic and commercial viability of each project agreement; ensuring that parties to a project comply with project agreement and provisions of the PPP Act; execute procurement processes, monitor implementation of the project agreement with in the contracting authority; ensure transfer of assets at termination is in line with the terms and conditions of the project agreement; liaise with all key stakeholders of the project; and oversee management of the project in relation to project agreement. The project teams are also mandated to maintain a record of all project documentation and agreements, implement recommendations and guidelines issued by the PPP committee, and submit annual reports to the PPP unit, and any other reports or information as may be requested by the PPP unit and committee (Sec. 16).

6.2.2.7 Process Auditor

The process auditor is "a person appointed as such by the Accountant General", and is responsible for investigating and ensuring that the contracting authority complies with the required PPP Act provisions before the PPP agreement is approved by cabinet and signed by the accounting officer.

6.2.2.8 Transaction Advisor

The transaction advisor refers to a person with appropriate skills and experience appointed by the accounting officer to assist and advise the contracting authority or PPP Unit on PPP matters, which include preparation, accession and conclusion of a project agreement, and the financial close (Sec. 4). The PPP Act mandates the transaction advisor to: carry out a comprehensive feasibility study for the project; ensure optimum risk allocation in the PPP agreement; design and negotiate a PPP agreement that guarantees sustainable social benefits; and safeguard the interests of the contracting authority in the management and execution of the project (Sec. 18).

6.2.2.9 Evaluation Committee

The evaluation committee is a team of persons with appropriate skills, appointed by the accounting officer from the staff within or outside the contracting authority, to evaluate bids submitted for a given PPP project (Sec. 19).

6.2.2.10 Private Party

The private party is a special purpose vehicle company incorporated under the laws of Uganda, for purposes of implementing a specific PPP project (Sec. 4 & 20 (1)). The private party must have both the technical and financial capacities required to perform project tasks, and bear all the responsibilities and risks of financing for effective performance of its obligations under the project agreement (Sec. 20 (3-6)).

6.2.2.11 Minister of Finance

The responsibilities of the Minister of Finance include that he/she: must publish the PPP agreement value prescribed by cabinet (Sec. 26(2)); must lay before parliament, a copy of the agreement within one month after agreement signing (Sec. 26 (10)); may specify the PPP agreement type to use (Sec. 26 (6)); may by statutory instrument amend the schedule to the PPP Act (Sec. 50); shall receive annual reports and audit financial statements from the private party six months after the end of every financial year (Sec. 28 (4)); must receive periodic reports from the contracting authority (Sec. 27 (2)); and may by statutory instrument make PPP regulations. Equally, the minister is tasked to: monitor contingent

liabilities and accounts and budgetary PPP issues within the ministry of finance (Sec. 11 (p)); recruit and appoint the director of the PPP Unit in consultation with the ministry of public service (Sec. 10 (3)); appoints the non-public officers of the PPP committee (Sec. 5 (2a-b)); determines the term of office of the PPP committee members in consultation with public service commission (Sec. 6); may by statutory instrument approve the undertaking of any project other than those mentioned in section 2 (1a-j) of the PPP Act. Finally, the minister of finance must provide written approval to any transfer in shares, increase in share capital or changes in the corporate status of a SPV company (Sec. 20 (2)), and also provide a written confirmation about the availability of the required financing to the contracting authority, where the PPP project is to be financed by the contracting authority (Sec. 23 (4)).

6.2.2.12 Minister of the Contracting Authority

Similar to the minister of finance, the minister of the contracting authority must receive project periodic reports from the contracting authority (Sec. 27 (2)) and must provide written approval to any transfer in shares, increase in share capital or changes in the corporate status of a SPV company (Sec. 20 (2)).

6.2.2.13 Cabinet

The cabinet is responsible for, among others: prescribing the value of the PPP agreement that would require cabinet approval (Sec. 26 (1)); approving PPP agreements before the accounting officers can sign them, unless the project agreement is below the approval value for cabinet (Sec. 26 (3) &Sec. 17 (4)); approving an amendment or variation to project agreement (Sec. 26 (8&9)); approving the use of direct procurement method for a project; and approving amendments to the Schedule to the PPP Act (Sec. 50).

6.2.2.14 Permanent Secretary of Ministry of Finance

In addition to being a member of the PPP committee, the permanent secretary of the ministry of finance is responsible for making rules for the administrative and financial frameworks of the PPP unit, as well as the relationship of the unit with the departments of the ministry of finance (Sec. 11 (5)).

6.2.2.15 Auditor General

The Auditor General is responsible for carrying out value for money audits on PPP projects in each financial year, in accordance with the National Audit Act, and each PPP project must be audited right from inception up to when it comes to a complete end, and must report to parliament about the outcomes of a completed audit (Sec. 30).

6.2.2.16 Accountant General

In addition to appointing the process auditor (*see* Sec. 4), the Accountant General prescribes the accounting and financial reporting rules for PPPs (Sec. 28 (3)).

6.2.2.17 Attorney General

In addition to being a member of the PPP committee (Sec. 5 (1a)), the Attorney General is responsible for clearing PPP contracts before they are awarded and signed between the private party and the contracting authority.

6.2.3 Public Private Partnership Process

For effective undertaking and management of PPP projects, the Republic of Uganda (2010:16) dissects project tasks into project development and project delivery stages. Whereas project development is a composition of project inception, feasibility studies and procurement tasks, on the other hand, project delivery is about implementation of project tasks post project financial close (see figure 6.1 below for details).

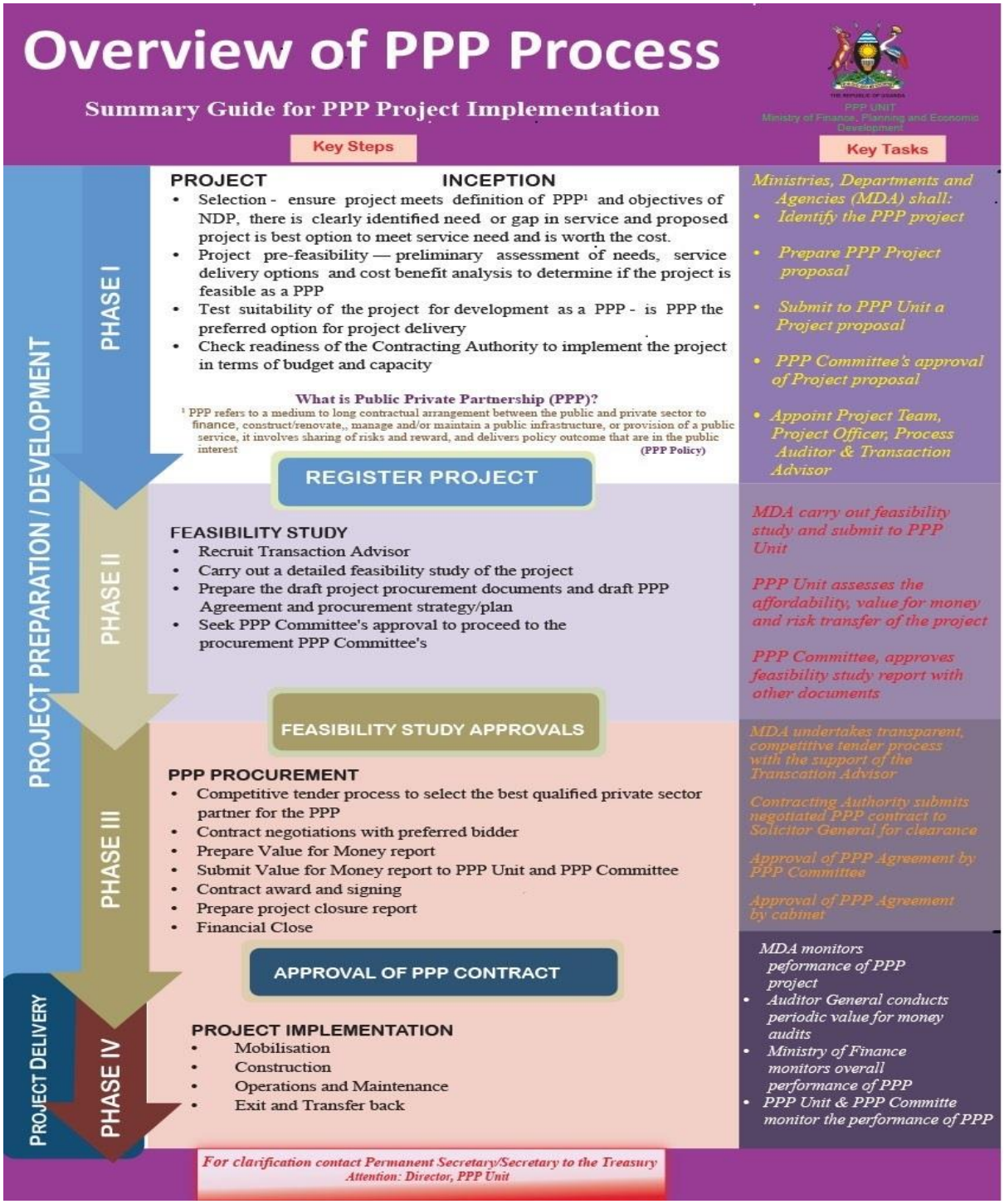


Figure 6.1. A summarised Public Private Partnership process for the Republic of Uganda

Source: PPP Unit, MFPED

Figure 6.1 above provides a more summarized version of the PPP process, highlighting the project stages with their corresponding tasks, and key action requirements from particular project stakeholders. The fundamental objectives for each of the project main tasks are set out hereafter. Project inception conducts a preliminary cost benefit analysis to confirm the suitability of the proposed project as a PPP. Project feasibility study provides a detailed viability report of the project with documents to be used during project procurement, the evaluation criteria and a draft contract agreement. PPP procurement ensures that the contracting authority attains the best deal, and signs a PPP contract with the most qualified private party for the project. Project implementation is focused on effective PPP contract management.

However, making reference to the PPP Act, although the applicability of project inception, feasibility study (Sec. 21 & 22), and PPP procurement to PPPs seem a little more clear, other than the very general provisions about the PPP project agreement (Sec. 26) and PPP forms (Sec. 37-45), the PPP Act is very silent about how project implementation (mobilization, construction, operation and maintenance, and exit and transfer back) fits within the whole PPP arrangement.

6.3 COMMON LEGAL AND POLICY FRAMEWORKS APLLICABLE TO PUBLIC PRIVATE PARTNERSHIPS

In this section, reference is made to common legal and policy frameworks as those frameworks that are almost relevant to all public investment projects. In particular, the applicability of PPDA Act, Development Committee Guidelines, Public Finance Management Act, National Audit Act, and Land Act, to PPP interventions is discussed.

6.3.1 Public Procurement and Disposal of Public Assets Act 2003

The PPDA Act 2003 as amended 2014 (Republic of Uganda, 2014a) as the law that regulates public procurement procedures and processes in Uganda, under section 88L (1&2) made two important provisions, which insinuated that PPP projects would be strictly undertaken through PPDA law. Section 88L(1) stipulates that guidance on the applicable procurement procedures and documents has to be sought from the PPDA Authority, where the procuring and disposing entity would want to use contracting arrangements that involve the mobilisation of private sector resources for purposes of financing, construction, operation and maintenance of public development projects or concessioning. Section 88L (2) of the same Act defines contracting arrangements, eluded to in section 88L (1), to "include financing by Build Own Operate (BOO), Build Own Transfer (BOT), Build Own Operate Transfer (BOOT) and Public Private Partnership (PPP)".

However, with the enactment of the PPP Act in 2015, the PPDA Act 2003 (as amended 2014) was further amended by substituting section 88L (1) with a provision that removes regulatory powers from the PPDA Authority on contracting arrangements that involve the mobilisation of private sector resources for financing, construction, operation and maintenance of public development projects or concessioning, while section 88L (2) was in its entirety repealed (Section 52 of the PPP Act 2015) to annul the PPDA law from being the supreme procurement law for developing and implementing PPP projects. Although these changes imply that PPP arrangements have to be undertaken and managed under the PPP law, on the other hand the PPDA law plays a complementary role in reinforcing the procurement provisions of the PPP law where such need would arise.

Section 16 (d) of the PPP Act provides that, where necessary, the procurement process for a PPP project can be undertaken using the PPDA Act. For instance:

- Section 15(3)) of the PPP Act 2015 indicates that the PPDA Act shall be used to procure external persons with appropriate skills and experience to occupy the positions of project officer, process auditor or transaction adviser, where the contracting authority lacks competent internal staff to take up such positions.
- Sec 24 (g) of the PPP Act 2015 states that a bidder or a bidder's representative may be disqualified from participating in the bidding process, where such participant had earlier been disqualified by the PPDA Authority (Sec. 24 (g), among other considerations (refer to the whole of Sec. 24)).

Finally, the PPP Act suggests that the procurement process of PPP projects must not only conform to the PPP Act alone, but also procurement best practices (Sec 11 (n)). In fact, no project can be implemented by a public agency as a PPP without prior comparison of Public procurement and PPP options to come to a conclusion that PPP is the most viable option (Sec. 21(3)); Sec. 22 (2d&3)).

6.3.2 Development Committee Guidelines 2016

Prior to the implementation of the National Development Plan (NDP) II in 2015, public investment in Uganda was being undermined by weak project identification, preparation, and appraisal processes, which caused unnecessary project implementation delays, cost overruns, and increased commitment fees due to limited capacity to utilise foreign loans (Republic of Uganda, 2016:iv). As a corrective measure, the MFPED strengthened the Public Investment Management System (PIMS) processes and controls for the identification and pre-investment project phases, and for the investment, operation and ex-post evaluation phases as well (See appendix E). The new or 2016 PIMS framework for Uganda, for instance, introduces four approval levels before any project is admitted into the Pubic Investment Plan (PIP) (Republic of Uganda, 2016:3). The first approval is for preparing the project concept which must

demonstrate the alignment of the project idea to the National Development Plan. The second approval is for preparing the project profile which must demonstrate the expected project results and how the stated results must be measured. The third approval is for undertaking a prefeasibility study that would demonstrate whether all alternative interventions have been evaluated, while the fourth approval is for undertaking a detailed feasibility study only for the project implementation option which contributes greatest to the economy.

The PIMS provides two options, the Traditional Public Sector (TPS) and the PPP, and any public project must be executed as either a TPS or PPP project. Apart from the recurrent budget based funded projects, all conceived public projects (each with a capital that covers at least 70% of the total project cost) must be undertaken within the confines of the PIMS framework. However, if after the prefeasibility study the objectives of a given project are found to be well achieved through PPP option, the project is immediately transferred to the PPP Unit. Whereas from the detailed feasibility study stage onwards, the approved PPP project must comply with the PPP framework, on the other hand, the project found fit for TPS option must systematically comply with the PIMS framework until the completion of the ex-post evaluation phase of the project.

6.3.3 Public Finance Management Act 2015

With the enactment of the Public Finance Management Act (PFMA) 2015, the Public Finance and Accountability Act 2003 (which previously regulated public finance matters) was rendered obsolete and unusable (Republic of Uganda, 2015b, Sec. 84). Whereas each of the clauses of the PFMA 2015 may in one way or another be purposeful to every government investment project, this study concurs with the EU (2016:5) assertion that the foremost relevance of the PFMA 2105 to PPP arrangements lies in the public debts, grants and guarantees management, and accounting and auditing of public funds. Because PPP financing requirements are often far higher than what governments alone can afford, as such most, if not all, PPP projects have to be undertaken through grants financing and external borrowing (secured by SPV company or government) which obviously necessitate government guarantees, and regulation and control for proper use.

According to PFMA 2015, Sec. 42 (3) (Republic of Uganda, 2015b), public debts, guarantees, grants and any other financial liabilities of government should be managed in the context of the National Development Plan, the Charter of Fiscal Responsibility objectives, and the medium term debt management strategy. Notwithstanding section 44(3&4) of the PFMA 2015, when monetary grants and loans have been received by government, they should be used for the purposes for which they were intended to serve (PFMA, 2015, Sec. 43 (2) & 44 (1&2)), and no person nor public entity should solicit or receive loans or monetary grants, and/or issue guarantees, without prior approval of the minister of finance (PFMA, 2015, Sec. 36 (1)). It follows that the accounting and auditing procedures and controls

provided in the PFMA are, therefore, for protecting public funds and any other public resources including public debts, grants and guarantees from fraud, embezzlement and mismanagement (PFMA, 2015, Sec. 46 (3g) & 48 (2)).

Parts VI and VII of the PFMA 2015 respectively offer a detailed account on the management of public debts, grants and guarantees, and accounting and auditing of public funds (Sec. 36-44 & Sec. 45-54) for government projects, PPPs inclusive. At policy level, the minister of finance and the Accountant General respectively oversee the management of public debts and grants and guarantees, and accountability of public funds, while at the operational/contracting entity level these are responsibilities of the accounting officer. In addition, auditing supervision and practices of audit committees or officers at policy level is under the leadership of the Internal Auditor General, while at the contracting entity level this is the responsibility of the Internal Auditor (s). Other critical players that support the implementation of public debts, grants, accounting and auditing decisions include the Auditor General, Parliament, secretary to the Treasury, and Audit Committees.

6.3.4 National Audit Act (NAA) 2008

Article 163 of the Constitution of the Republic of Uganda 1995 (as amended 2005) gives powers to the Office of the Auditor General, under the leadership of an appointed Auditor General, to conduct financial, value for money (VFM), classified expenditure, procurement, and gender and environment audits on public and private sector organisations involved in the delivery of government investment project (s) or utilising public funds (NAA, 2008:4, & Sec. 13(1)-Republic of Uganda, 2008; Article 163 (3b) of the Constitution). Similarly, where the Auditor General finds it fit, "examines, investigates and reports on the expenditure of public monies disbursed, advanced or guaranteed to a private organisation in which Government has no controlling interest" (NAA, 2008, Sec. 18). In addition to conducting mandatory annual audits at the end of every financial year (NAA, 2008, Sec. 17(3)), the Auditor General may carry out random financial or VFM audits, and special VFM audits and investigations to establish how well public monies have been spent and other public resources utilised by organisations, as well as the actual conduct and performance of designated officers in the execution of their functions on government projects against the set standards (NAA, Sec. 21 & 22; Article 163 (3b) of the Constitution).

6.3.5 Land Act 1998 (as amended 2010)/The Land Tenure System

Since roads are constructed on land, and given that this study investigates how PPPs can facilitate road infrastructure development in Uganda, it becomes paramount to provide a brief discussion on the Land Law provisions. Land in Uganda is either customary, freehold, mailo or leasehold owned. Unlike the previous constitutions which stated that land belonged to the government (s) *(*Chapter xii & Chapter xi

of the Constitution of Uganda 1962 and the Constitution of the Republic of Uganda 1967 respectively), the current laws state that "land belongs to the Citizens of Uganda" (Constitution of the Republic of Uganda 1995 as amended 2005, Article 237(1); Land Act 1998 as amended 2010, Sec. 2, Republic of Uganda, 1998a). This means that every person, whether as an individual or a group, has a right to land ownership (Constitution of the Republic of Uganda 1995 as amended 2005, Article 26 (1)).

One of the critical issues that seem to stall public investments in Uganda is the acquisition of land from landowners for infrastructure projects. Although land owners should not be compulsorily deprived of their land, or any interest in or right over the land, where land is required for public use or interest the laws of Uganda permit government to compulsorily acquire (expropriate) or possess land from the owners (Land Act 1998 as amended 2010, Sec. 42; Constitution of the Republic of Uganda, Articles 26 (a) & 237 (2a)). However, the admissibility of such government action is pegged on four fundamental conditions:

- prompt payment of the seller;
- fair and adequate compensation of the seller, on the willing seller willing buyer basis;
- Government takes possession or acquisition of the land after payment (different from the previous Land Acquisition Act of 1965, chapter 226, which venerates the compulsory acquisition of land before the land owner is compensated);
- with government acquisition or possession, any person with an interest or right over the land must be allowed to access courts of law for remedy (Land Act 1998 as amended 2010, Sec. 42; Constitution of the Republic of Uganda, Articles 26 (b) & 237 (2a)).

Notwithstanding the above legal provisions, the acquisition of land in Uganda remains a blockage to public infrastructure development due to Government delays to compensate land owners, prolonged disagreements between government and land owners over the fair land value, disputes over the rightful owner (s) for certain pieces of private land, and persistent delays by courts of law to offset cases relating to land ownership or land takeover by government. With court case delays in particular, according to Ravet and Tumusiime (2017:2), the average time for processing a court case by lower courts in Uganda is 2 years, and approximately 6 years for a Supreme Court appeal case. Consequently, given that one of the roles of government is to regulate the acquisition, ownership, use and disposition of land (The Constitution of the Republic of Uganda 1995 as amended 2005, clause XI (iii), Pg.17 & Article 242), and being aware of the amendment provisions of articles 259 and 262 of the Constitution of the Republic of Uganda, the government has embarked on the process of amending article 26 (in particular section 2 (b)) of the Constitution to allow government expeditiously to acquire or possess private land without any hindrances from land owners or purported owners for public infrastructure development.

The proposal seeks to: *"enable Government, or a local government to deposit with court, compensation awarded by the Government for any property declared for compulsory acquisition; empower the Government or local government to take possession of the declared property upon depositing the compensation awarded for the property with court, pending determination by the court of the disputed compensation awarded to the property owner or person having an interest in or right over the property; empower the property owner or person having an interest in or right over the property to access the deposited compensation awarded at any time during the dispute resolution process; and (d) empower Parliament to prescribe, by law, the time within which disputes arising out of compensation shall be resolved"* (Constitution Amendment Bill, 2017, Bill number 13, Republic of Uganda, 2017c). As per government plan, the above statement (in italics) will be added to article 26 of the Constitution after section 2.

According to Betty Amongi (2017) - the minister of Lands, Housing and Urban Development, the amendment does not at all change land ownership, and government is still committed to compensating the land owners prior to government acquisition or possession of land (as per article 26, Sec. 2(b) of the Constitution), unless a land owner disputes government's compensation value for the land. Depending on the behaviour of the landowner, the intention of the amendment is to enable government to access and start using the land for infrastructure development after, during or before compensation. However, Oloka-Onyango (2017) refers to such an amendment as "illegal and unconstitutional", and "amendment-by-infection". It is implied that the alteration of a specific constitutional provision (such as article 26) has spill-over effects on other parts of the constitutional document. As such, Ravet and Tumusiime (2017:2) argue that, "if an amendment of this nature is passed into law will not only escalate the current procedural irregularities but will also worsen the current delays in paying the awarded amounts".

6.4 ROAD SPECIFIC LEGAL AND POLICY FRAMEWORKS APPLICABLE TO PUBLIC PRIVATE PARTNERSHIPS

This section comprises of the Draft Road Toll Policy, and a combination of the National Environment Act with the Environmental Impact Assessment Guidelines for Road Projects. The Environmental Impact Assessment Guidelines for Road Projects alongside the National Environment Act, and the Draft Road Tolling Policy, operationalise environmental compliance and tolling for PPP road projects respectively.

6.4.1 Draft Road Tolling Policy 2017

The Draft Road Tolling Policy (DRTP) 2017 (Republic of Uganda, 2017a) is the first of its kind in Uganda, and draws experiences largely from the South African and partly from Ethiopian road tolling

models (Republic of Uganda, 2017a:iv). Although tolling practices for South Africa and Ethiopia are fairly similar, there is a responsibility dissimilarity in road toll management between the two countries. Whereas road toll management is a responsibility of the National Roads Authority (SANRAL) for South Africa, in Ethiopia the same responsibility rests with the Ethiopian Toll Roads Enterprise (a public enterprise) which is independent of the National Roads Authority, the Ethiopian Roads Authority (ERA).

In Uganda, any road category (national, urban, district and community access) qualifies for tolling so long as it meets the national road tolling viability requirements, as may be set out in the Tolling policy. Whereas the PPP Act (2015, Sec. 5a) encourages private sector participation for road infrastructure development, and sections 38-44 of the same Act provides for PPP forms which by their nature suggest road tolls to be inevitable, and while the URF Act 2008 (Sec 21 (1a, v)) notes that tolling is an effective means for financing road maintenance, surprisingly though, none of the two laws above makes mention of the implementation and operation mechanisms for toll roads. Therefore, the DRTP 2017 comes in handy to bridge this gap by working as a basis for the introduction, regulation, management and operation of toll roads. Additionally, the Government has drafted a Roads Bill, which when passed into law will regulate the levying, enforcement and collection of tolls, and the utilisation of funds from tolls to meet roads construction, operation and maintenance costs and any other obligations associated with road infrastructure (Republic of Uganda, 2017a:6).

Tolling in the Ugandan context serves to promote road projects based on toll-funded borrowing, to motivate the private sector to finance and participate in road development services, to raise supplementary revenue for further road infrastructure improvement, maintenance and development, and as a means of decongesting heavily congested urban centres during rush hours, among others (Republic of Uganda, 2017a: iv & vi). Unless other stronger economic or social justifications emerge, tolling is restricted to roads and concession agreements that exhibit financial viability, high traffic volume forecasts, and whose resultant investments are envisioned to significantly improve road infrastructure facilities and services for toll payers and other road users as a whole (Republic of Uganda, 2017a: v). Although collected tolls should primarily be ring-fenced and dedicated to paying the costs of designing and construction, rehabilitation, upgrading, maintenance and operation of toll roads (v), for regional harmonisation, however, part of such funds can be used to support road infrastructure development in less developed regions of the country (Republic of Uganda, 2017a: 13).

Operating of tolls will be executed through three arrangements, namely, PPP, direct government operation and management, and outsourcing to a private party. PPP toll agreements are restricted to seven PPP forms (i.e. Build, (Finance), Operate and Transfer; Build, Own, Operate and Transfer; Formation of a private trust to finance toll concession; Finance, Operate and Transfer; Design, Build,

Operate and Transfer; Design, Build, Finance and Operate; Design, Build, Finance and Transfer). With direct government operation and management, a designated government authority will operate tolls on a commercial basis with minimal private sector engagement, whereas with outsourcing arrangements, selected individual toll road projects will be contracted out to the private sector on a concession basis through competitive tendering without any financial guarantees being provided by government.

The Policy proposes tolling to be implemented through three methods (manual, electronic and mixed), and three operating systems consisting of open, closed, and shadow tolling (Republic of Uganda, 2017a:11). The payment of tolls will apply to every vehicle that uses the toll road irrespective of its class, except for toll exempt vehicles which include police vehicles on duty, military vehicles on duty, and emergency service vehicles, and vehicles for road users living and working along the toll road without an alternative access route (s). The toll tariffs to be paid by vehicles will be based on the perceived benefits a toll road offers to each vehicle class relative to the available alternative free route (s). Table 6.1 below provides the vehicle classification system for Uganda.

Table 6.1. Vehicle Classification in Uganda

Class	Type of vehicle	Description
1	Motorcycles	Vehicle with two wheels, excluding tricycles.
2	Light vehicles	Light vehicles with 3 or more wheels with or without trailers and with no heavy axle* on the vehicle or trailer.
3	Medium goods vehicles and medium buses	Goods vehicles and buses with three or fewer than three axles of which one or more is a heavy axle*.
4	Large goods vehicles and large buses	Goods vehicles or buses with four or more axles of which one or more is a heavy axle*.

Key: * A heavy axle is defined as an axle with more than 2 wheels

Source: Draft Tolling policy 2017 (Republic of Uganda, 2017a:12)

6.4.2 National Environment Act, 1995, and Environmental Impact Assessment Guidelines for Road Projects 2004

According to the National Environment Management Policy 2014 (Republic of Uganda, 2014b:27) PPP cooperation has become a powerful incentive and means through which modern infrastructure financing and environmental management practices are improving the quality and efficiency of public services. As such, environmental awareness and management is synonymous with sustainable development (Constitution of the Republic of Uganda 1995, as amended 2005, Article 245). In order to meet the

present and future development needs, appropriate measures must be taken to minimise, protect and preserve natural resources and their users (people and other inhabitants) from abuse, damage and destruction. The Constitution of the Republic of Uganda refers to natural resources as "land, air, natural lakes and rivers, wetlands, forest reserves, game reserves, national parks, and any land that is reserved for ecological and tourism purposes for the common good of all citizens" (Article 237(b); clause XXVII, Pg. 19).

To shape Uganda's environmental agenda, in 1995 and 1996 respectively, the National Environment Act was enacted and the National Environment Management Authority (NEMA) was formed purposely to coordinate, monitor and supervise the management of the environment for sustainable development. As a result, several environment related regulations (Winyi, 2014:17) have been made to operationalize the environmental law in order to support the country's development path. Given that the key result area of any environment policy lies in its assessment criteria and processes, and because "the use of Environment Impact Assessment (EIA) has not yet been fully understood and appreciated by policy makers and resource users" (The National Environment Management Policy 2014, Republic of Uganda, 2014b:18), this study focuses its discussion for this subsection on the EIA tool. Environment Impact Assessment refers to "a systematic examination conducted to determine whether or not a project will have any adverse impact on the environment" (The National Environment Act 1995, Cap 153, Sec. 1 (r), Republic of Uganda, 1995). A sound EIA also involves conducting an economic analysis on the costs and benefits of each identified environmental impact for developing apposite preventive or mitigation measures for smooth project implementation and monitoring (Environmental Impact Assessment Guidelines for Road Projects 2004, Republic of Uganda, 2004:50; Winyi, 2014:11).

With regard to roads development, EIA is mandatory for "all major roads, and all roads in scenic, wooded or mountainous areas" (The National Environment Act 1995, Cap 153, third schedule, clause 3 (a & b)), and any major repairs, extensions or routine maintenance of any brownfield road project (Environmental Impact Assessment Regulation 1998, Sec. 3 (1b), Republic of Uganda, 1998b). In Uganda, EIA processes and decisions are steered through: Environmental Impact Assessment Guidelines 1997; Environmental Impact Assessment Regulations 1998; Environmental Impact Assessment Reference Manual 2002; Conduct and Certification of Environmental Practitioners Regulations 2003; and Environmental Impact Assessment Guidelines for Road Projects 2004. With EIA for road projects, environmental elements include: physical **(**geology, topography, soils, climate, air quality, drainage patterns, surface water, groundwater, water quality and soil erosion); biological (flora and fauna, habitats, rare and endangered species, protected areas); socio-economic (demographic characteristics, land uses, agricultural and economic activities, modes of transport, road networks and their usage, origin and destination of goods and passengers transported, a geographical area's administrative structures, employment); and cultural (archaeological, historical, religious and cultural

features, scenic beauty and wilderness value) (Republic of Uganda, 2004:12; Kakuru, Musoke & Kyakuwaire, 2001:7).

A change in any of the above environmental elements resulting from road development activities may have varying and enormous repercussions on the environment in terms of duration, timing, magnitude, spatial coverage, and possibility of occurrences (Environmental Impact Assessment Guidelines for Road Projects, 2004, Republic of Uganda 2004:12), at any point of the road development cycle. Subsequently, the "impact significance" for each impact factor must be established in order to construct suitable impact mitigation or preventive measures. According to Kampala Capital City Authority (KCCA) (2016:10) significance of impact is a combination of impact severity and impact likelihood; where impact severity is a combination of (duration, timing, magnitude, spatial coverage), and impact likelihood is about (the possibility of an impact occurring), as illustrated in table 6.2 below.

Table 6.2. Impact Significance Options

Impact Severity	Impact Likelihood			
	None	Low	Medium	High
Low	Negligible	Negligible	Negligible - Minor	Minor
Medium	Negligible	Minor	Minor - Moderate	Moderate
High	Minor	Moderate	Major	Major

Source: KCCA (2016:10)

From table 6.2 above, impact significance options range from negligible, minor, moderate, major or a combination of some of these options. The meaning attached to each of the impact significance options is as follows: "Major" shaded red (impacts are unacceptable, signifying that mitigation measures must be implemented to reduce or stop the significance); "Minor- moderate" and "moderate" shaded orange (impacts are tolerable, demonstrating that efforts must be made to reduce the impact to levels that are as low as reasonably practical); and "Negligible", "Negligible-minor", and "minor" shaded yellow and white (impacts are acceptable, implying that the impacts identified may not justify implementing mitigation measures) (KCCA, 2016:11). A detailed account of road activities with their potential impacts and mitigation measures at every project phase has been provided in Appendix F**.**

As a rule of the thumb, EIA should be conducted prior to project licensing and construction (Kakuru *et al.*, 2001:7; Winyi, 2014:31; Ecaat, 2004:iii; also see figure 2 below), but should also be integrated in the overall road development process for effective project planning, construction, operation and maintenance (see figure 6.2 below).

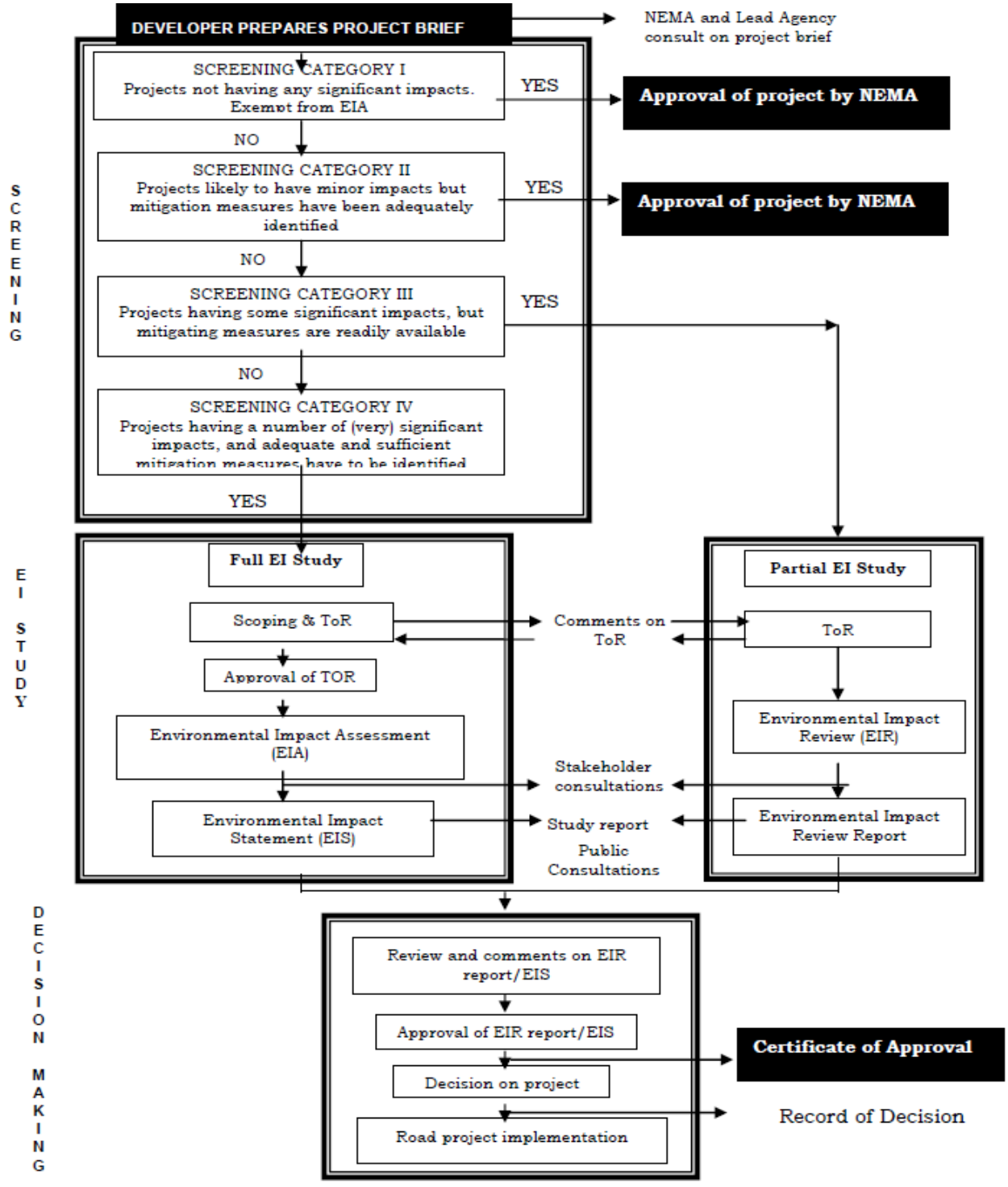


Figure 6.2. The Environment Impact Assessment Process for Road Projects

Source: Environmental Impact Assessment Guidelines for Road Projects 2004 (Republic of Uganda, 2004:23)

In consultation with the lead agency and NEMA, the developer is responsible for conducting the EIA and meeting costs involved (Winyi, 2014:14). Throughout the EIA process, the developer prepares

necessary documents and reports, and submits them to the lead agency for review, as well as to NEMA for both reviews and approval decisions. However, where the lead agency is the developer of the project, it automatically assumes the responsibilities of the developer and directly deals with NEMA on EIA matters. Note that the outcome of every screening category is the issuance of a certificate of approval by NEMA to the developer. Whereas screening category I and II may be completed in a reasonably short duration because of the minimal rigor required, category III and IV are very rigorous and may take more time to execute since they, respectively, require conducting partial and full environmental impact studies. A detailed screening criterion for road projects or activities and outcome decisions for each screening category is provided in table 6.3 below:

Table 6.3. Road project environmental screening

Screening Category	Types of Road Project or Activities	Road Project Environmental classification	Action required before the project can proceed
I	• routine maintenance works such as pavement repairs, clearing of culverts and drains and roadside vegetation • periodic maintenance works such as grading and regravelling, sealing, surface dressing and road marking and furniture	Projects certainly not having significant impact on the environment and should therefore be exempt from further EIA processing	Certificate of approval issued by NEMA
II	• partial rehabilitation works, such as reconstruction of small sections of existing paved roads • projects involving upgrading from earth to gravel	Projects likely to have some minor impacts on the environment but for which adequate and sufficient mitigation measures have been identified	Certificate of approval issued by NEMA
III	• major rehabilitation/improvement projects for existing roads • projects involving pavement strengthening • projects involving upgrading from earth or gravel to bitumen standard	Projects that have some significant environmental impacts, where adequate mitigation measures are readily available, and therefore a limited analysis is required	Environmental Impact Review (EIR). EIR report to be approved by NEMA, as well as issuance of certificate of approval
IV	• construction of new roads • all road rehabilitation projects with new alignments • all road projects requiring relocation of people through acquisition of land for easement, for example the upgrading of urban sections of major roads • all road construction and rehabilitation projects passing through environmentally sensitive areas such as: ✓ wetlands ✓ forests ✓ national parks/protected areas ✓ areas prone to desertification ✓ areas prone to erosion (mountainous or steep terrain) ✓ areas of unique scenery ✓ areas of scientific, historic or archaeological interest ✓ areas of special cultural, traditional or religious value ✓ areas of importance to threatened ethnic groups	Projects having a number of (very) significant impacts on the environment (whether adequate mitigation measures can be identified or not), hence requiring a full environmental impact study	Environmental Impact Assessment. Environmental Impact Statement (EIS) to be approved by NEMA, as well as the issuance of a certificate of approval

Source: Modified from the Environmental Impact Assessment Guidelines for Road Projects 2004 (Republic of Uganda, 2004:20-21)

As already alluded to, EIA must be integrated in the overall road project life cycle. Although the EIA process for road projects in figure 6.2 above over-emphasizes meeting environmental concerns during the planning activities of a project, on the other hand it is submitted that environmental outcomes from the EIA should equally be closely followed up in the implementation, operation, and maintenance stages of the project, if EIA schemes are to have positive significant impacts on road projects. Figure 6.3 below provides a two-in-one integrated EIA and road project life cycle process.

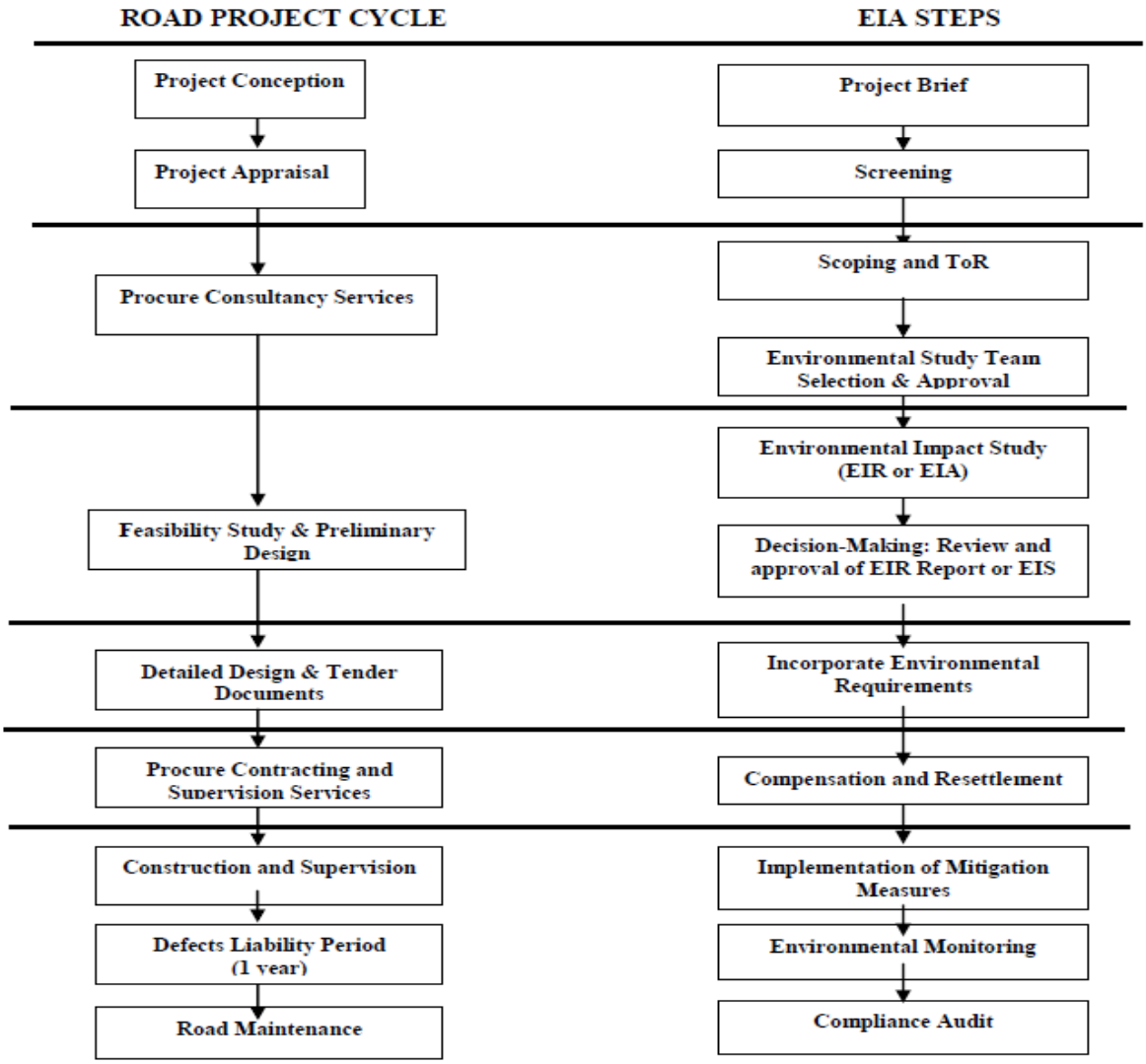


Figure 6.3. Integration of Environment Impact Assessment with the Road Project Cycle

Source: Environmental Impact Assessment Guidelines for Road Projects 2004 (Republic of Uganda, 2004:15)

Whereas conventional environment policies seem to view EIA to end at a point when project construction is about to commence (see figure 6.2 above), the exceptional features of the above "EIA and road project lifecycle integrated process" in figure 6.3 is that project stakeholders recognise the

implementation of environmental mitigation measures, and management of environmental monitoring and auditing, as being part and parcel of the EIA process for road projects. In addition, in agreement with article 26, section 2(bi) of the Constitution of the Republic of Uganda, the integrated process in figure 6.3 above indicates that compensation payments or resettlements for land and property owners should be made prior to the commencement of road construction. According to the Environmental Impact Assessment Guidelines for Road Projects (2004:43) "the project developers are responsible for compensation processes, while road authorities are specifically responsible for effecting compensation". Alongside road project developers, other key stakeholders involved in the compensation and resettlement processes are the Ministry of Water, Lands and Environment, and the Office of the Prime minister, for compensation and resettlement purposes respectively (Republic of Uganda, 2004:46).

In conclusion, the EIA is both a project planning and implementation management tool that: identifies negative and positive impacts of a project; determines whether adverse impacts can be mitigated; assesses the alternative projects or activities given the impact significance of the proposed project; recommends preventive or mitigation measures, and determines whether a proposed project or policy should be implemented or modified; and ensures that the suggested measures and recommendations are implemented. Amidst the aforementioned strengths of the EIA tool, critics cynically argue that protection of natural resources have been favoured over socio-economic factors by managers and practitioners (Tsunokawa & Hoban, 1997:8). For instance, in 2015 the World Bank suspended funding (over UGX.800bn) for Ugandan road projects based on allegations of sexual abuse by male contractors on female employees and minor girls, and general mistreatment of workers by contractors on the 66.2km Kamwenge Fort portal road project in Western Uganda (Daily Monitor, 30th November 2016:3). Tsunokawa and Hoban (1997:8) argue further that, save for project site impacts and those impacts that directly impede project implementation, actual EIAs normally overlook broader local community, regional and sector environmental impacts, and their future development plans. Yet globally, environmental laws and policies provide for such environmental requirements (KCCA, 2016:9; Republic of Uganda, 2004:10).

6.5 CHAPTER SUMMARY

The Constitution as the supreme law of the land provided the opening remarks in the introduction section of the chapter. The applicability of the Constitution was integrated in the discussions for most of the other legal and policy frameworks. From the review made, we observe that the Constitution of the Republic of Uganda not only provides for road development, but also PPP modalities (refer to the summary in section 6.5 and details in the whole of chapter 6).

Taking stock of the several aspirations made in the PPP policy in 2010, by the end of this study a lot had been achieved but much more remained unaccomplished. The PPP Unit and PPP Committee have been created, and the PPP Act was enacted. However, PPP frameworks lack regulations and operating guidelines, standardised processes, documentation are almost non-existent, and no clear or well-structured PPP capacity building programmes exist, among others. Furthermore, although the PPP Act seems to be a well thought through law, it however downplays the need for clear and detailed procurement (apart from procurement methods), construction, operation, and maintenance processes. In addition, from the PPP Act provisions, it is observed that the ministry of finance seems to overshadow PPP operations.

Although the Draft Road Tolling Policy and the Draft Roads Bill pave the way for operation and tolling of PPP roads, however, without transforming these frameworks into full policy and laws respectively, the operations and maintenance activities of the road projects will definitely be curtailed. In fact, historically Uganda's public sector is slow at expediting policy or law enactment processes, no matter the urgency. Notwithstanding the government's delays in compensating landowners, the current land acquisition system favours landowners over government's efforts to accelerate public infrastructure development. Furthermore, although the PPP system is a different procurement law from the PPDA Act, the PPDA law, however, not only plays a complementary role to PPPs but also works as one of the indispensable benchmarking standards for choosing to undertake a public project as a PPP over other options. With environmental considerations, a credible EIA model is one that makes a trade-off between ecological and social, economic and technological, political and legal factors, and their impacts on the PPP project cycle in its entirety.

Finally, although the Arbitration and Conciliation Act is mentioned in the PPP Act as the applicable law for PPP dispute resolution, and notwithstanding the existence of PPP guidelines for Local Governments (developed between MoLG and UNDP), these were excluded in the discussions of this chapter on the following accounts. The Arbitration and Conciliation Act is too generic and the writer's view inadequate to effectively address complex PPP disputes, while the PPP Guidelines for Local Governments lack a clear link between it and the PPP Act 2015.

7 CHAPTER 7: RESEARCH METHODOLODY

7.1 INTRODUCTION

Based on the research problem, question, and objectives, this chapter presents and justifies the methodology adopted to collect and analyse data, and to report findings that emanate therefrom with the aim of constructing a suitable public private partnership governance model for developing road infrastructure in Uganda (refer to sections 1.3-1.6 of chapter one). Since the success of any research largely depends on research methodology (Babatunde, 2015:82), a suitable research design and approach, data collection methods and procedures, and data analysis and findings reporting style had to be used. Detailed narrations on how the aforementioned methodological applications were utilised to undertake and accomplish the tasks of this study, are provided in the subsequent sections of the chapter. Furthermore, this chapter presents the analysis of the demographics features of the respondents based on the interviews conducted.

7.2 RESEARCH DESIGN AND APPROACH

The study adopted an exploratory research design, and a qualitative research approach was used for both data collection and analysis. Exploratory design became suitable because this study begins from what is unknown to the researcher in order to discover what is known by the respondents or hidden in the documents or literature. With the objective of gathering detailed information about the phenomena under study a qualitative research approach was automatically found more appropriate than other research approaches. In agreement with this choice is Strydom (2014:152), who argues that most exploratory studies use qualitative approaches to collect data. One of the advantages of qualitative research over other research approaches is the fact that the respondents' personal feelings, thoughts, examples and experiences about a phenomena or the situation under investigation enriches the research outcome (Yilmaz, 2013:313). In addition, with qualitative research more extensive data is collected and reported. This is possible because findings from qualitative studies are largely shaped by the respondent's viewpoint, contrary to other research approaches, for example, quantitative research (Krefting, 1991: 214).

7.2.1 Exploratory Research Design

According to Brink and Wood (1998:312) and Brink (1996:11), exploratory studies examine new or less researched areas to identify new knowledge, new understanding and meaning, and to explore factors related to the topic. This is corroborated by Robson (2002:59) who argues that exploratory

design enables the effective assessment of a phenomenon in a unique way to establish what is happening around it for new insights. Concisely, the study employed exploratory research design to:

- Satisfy the researchers' curiosity and desire for better PPP understanding;
- Test the feasibility of undertaking more extensive PPP studies;
- Develop the method to be employed in any subsequent PPP study;
- Explicate the central PPP concepts and constructs of a study;
- Determine priority for future PPP research; and
- Develop new assumptions about (PPPs) an existing phenomenon (Itanyi, Ewurum & Ukpere, 2012: 11112).

In advancing the above aspirations, research was conducted around one research question and six research objectives (refer to section 1.4 and 1.6 respectively). For each of the six-research objectives, the researcher examined relevant factors in detail to arrive at an appropriate description of the reality of the existing situation (Brink & Wood 1998:283-286), the outcome of which necessitated the construction of a suitable public private partnership governance model for developing road infrastructure in Uganda. Because no such study has been conducted in Uganda, its novelty dictated the use of exploratory research philosophies. A key advantage with exploratory research design lies in its flexibility and adaptability to change. This is emphasised by Saunders, Lewis and Thornhill (2009:140) who argue that, when conducting exploratory research, one must be willing to change direction as new data may appear and trigger new insights. However, the flexibility inherent in such studies does not mean absence of direction to enquiry (Adams & Schvaneveldt, 1991, as cited in Saunders et al., 2009:140), but implies that the focus is initially broad and gradually becomes narrower as the research progresses. Given that this research was conducted on a new and developing procurement framework, a great sense of flexibility was inevitable. In fact, before the end of this study in 2018 many PPP policy and operational issues had taken place.

7.2.2 Qualitative Research Approach

Qualitative research approach refers to the type of research which "relies on text data rather than numerical data, and analyzes the data in its textual form rather than converting it to numbers for analysis" so as to generate meaning out of it (Carter & Little, 2007:1316). Also, qualitative data may appear in graphical or pictorial forms (Yilmaz, 2013: 315). Relevant methods of accessing qualitative data include interviewing, literature review and documentary analysis (Kitto, Chesters & Grbich, 2009: 243; Strydom, 2014:152), and these are explored further in section 7.3 below.

Like any credible research, this study was undertaken within the philosophical dimensions of ontology, epistemology, axiology, rhetoric and methodology. By definition, ontology is about "what knowledge

is"; epistemology is "how knowledge is known"; axiology is "what value goes into knowledge"; rhetoric is "how knowledge is written about"; and methodology are "the processes of studying or discovering knowledge" (Yilmaz, 2013:315-316; Awodele, 2012:97). Given that this study purely takes a qualitative research stance, philosophical underpinnings of qualitative research, as advanced by Yilmaz (2013), were adopted.

Table 7.1. Explanation to Qualitative Research Philosophical Underpinnings

Assumptions	Questions	Characteristics	Implications for Practice (Examples)
Ontological	What is the nature of reality?	Reality is subjective and multiple, as seen by participants in the study	Researcher uses quotes and themes in words of participants and provides evidence of different perspectives
Epistemological	What is the relationship between the researcher and that being researched?	Researcher attempts to lessen distance between himself or herself and that being researched	Researcher collaborates, spends time in field with participants, and becomes an 'insider'
Axiological	What is the role of values?	Researcher acknowledges that research is value laden and that biases are present	Researcher openly discusses values that shape the narrative and includes his or her own interpretation in conjunction with the interpretations of participants
Rhetorical	What is the language of research?	Researcher writes in a literary, informal style using the personal voice and uses qualitative terms and limited definitions	Researcher uses an engaging style of narrative, may use first-person pronoun, and employs the language of qualitative research
Methodological	What is the process of research?	Researcher uses inductive logic, studies the topic within its context, and uses an emerging design	Researcher works with particulars (details) before generalisations, describes in detail the context of the study, and continually revises questions from experiences in the field

Source: Yilmaz (2013:316)

Although, methodologically, table 7.1 above indicates that qualitative research takes up the inductive logic phenomena, however, in order to fully interrogate the data for more sound results an abductive logic phenomena had to be applied. Abductive logic is a type of data collection or analysis that combines both inductive and deductive logic in a single research. According to Given (2008:71), inductive logic methodology approaches data collection or analysis without a pre-set list of factors, while deductive logic methodology approaches data collection or analysis from prior studies, relevant literature, research questions (hypotheses), and the researcher's own experience with and knowledge of the phenomenon. A description of how inductive, deductive and abductive methodological approaches were used in this study is now provided. Objectives 1, 2, 3, 4, 5 (i.e. chapters 2, 3, 4, 5, 6) applied deductive logic as these were literature review or documentary analysis based. Objective 6 (i.e. chapter 8- the empirical study) applied inductive and deductive logic to generate findings and discuss findings respectively.

Chapter 9 (i.e. the aim of the study) used abductive logic since this chapter relied on findings from all the aforementioned objectives of the thesis.

7.3 RESEARCH METHODS AND PROCEDURES

Selltiz, Jahoda, Deutsch and Cook (1965) and Saunders *et al.* (2009), emphasize the reviewing of existing and relevant literature, the interviewing of persons with practical experience of the problem, and the analysis of "insight-stimulating" examples and documents as the main methods of data collection for exploratory studies. In this study, the analysis of insight examples relates to road cases (from other countries) discussed in chapter four, and these had to be drawn from literature. The aforementioned three data collection methods were employed on the premise that no single data collection method can adequately treat all problems of a discovery or testing (Mouton & Marais, 1990: 206). Accordingly, the deployment of a wide range of interconnected methods provided a better fix of the problem or subject matter under investigation (Denzin & Lincoln, 1994: 2). Provided in subsections 7.3.1-7.3.3 below, is an elaborate description of how each of the three data collection methods was applied.

7.3.1 Literature review

De Vos (1998:360) states that literature review usually consists of examination of selected empirical research, reported practice and identified innovation relevant to the particular concern under study. This method was found relevant because a lot of research has been conducted on PPPs. Accordingly, the study gathered information from journal articles, conference proceedings and books that discussed the PPP phenomena and PPP road examples (cases).

Given that data had to be collected from different literature sources, the theoretical sampling technique was used. According to De Vos (1998:254) and Coyne (1997:625), theoretical sampling is a process of data collection where the researcher simultaneously collects and analyses data to decide what data to collect next and from where. The application of theoretical sampling techniques became very resourceful in providing answers mainly to objectives 1, 2, and 3, as well as to a lesser extent with objectives 4 and 5 of the study (refer to section 1.6).

7.3.2 Documentary Analysis

Patton (2002:307, as cited in Ndoziya, 2014:103) suggests that documentary analysis "provides a behind-the-scenes look at the program that may not be directly observable and about which the researcher may not ask appropriate questions without the leads provided through documents". According to Bogdan and Biklen (1998), recent researchers have become interested in the analysis of

documents themselves. In the context of this study, documentary analysis relates to documents or research papers that are non-academic or researches from non-research based organisations or cites. Since very few empirical and conceptual studies have been conducted on PPPs in Uganda, documentary analysis became a very vital method for accessing additional information. As was the case with the literature review method, the collection and analysis of data collection were concurrently executed under this method.

Furthermore, like the literature review method, the documentary analysis method was undertaken using the theoretical sampling technique (refer to subsection 7.3.1 above). With this method, data was collected from newspaper publications, public sector documents, magazines, organisations' websites, public private partnership conferences (non-academic) and reports. The majority of the information came from internet/online sources and a few were acquired manually (i.e. in a hard copy) from organisations. Apart from soft copy documents accessed from the websites of several organisations across the globe, hard copy documents were collected from organisations in Uganda. Only documents that contained information on the PPP regime or road sub sector performance in Uganda qualified for use. Documentary analysis was the main data collection method used to answer objectives 4 and 5, handled in chapter 5 and 6 respectively. Where it became necessary relevant literature was used to supplement information from documentary analysis. Objective four examined the impact of road sub sector reforms on road infrastructure performance in Uganda, while objective 5 discussed the legal and policy frameworks that support PPP projects and programs in Uganda. The findings generated from the two aforementioned objectives/chapters became the basis for investigating objective 6, which is about "the suitability of the PPP environment for developing road infrastructure in Uganda".

7.3.3 Interviewing

Interviewing is a way to collect data as well as to gain knowledge from individuals (Kvale 1996:14). Compared to other data collection methods commonly used with empirical studies (e.g. surveys), interviewing became the preferred choice for this study because it allows intense probing of the respondents for deeper meaning and understanding of the phenomena or situation under study (Boyce & Neale, 2006:3). While interviews may take different forms (Coleman & Briggs, 2007), for this study the researcher interfaced with respondents in a one-on-one conversation using a semi structured interview guide (see appendix A). This approach led to collection of more comprehensive information about people's understanding of the PPP phenomena, as well as their perceptions about its suitability for road infrastructure development in Uganda. In addition, the one-on-one interview approach (unlike focus group) led to the collection of more trustworthy information as the majority of the interviewees felt secure and shared information freely.

Prior to the conducting of interviews (between August and October 2017 in Uganda) critical preparatory activities first had to be completed. A brief description of the main preparatory activities is provided hereunder. Preliminary contacts with potential respondents were conducted to establish the possibility of getting enough and credible respondents. An interview guide was developed, and pre-tested for reliability. Application for University ethical clearance was made and approval subsequently received. Lastly, introductory letters requesting relevant organisations to allow their employees to participate in the interviews were delivered. Upon completion of the aforementioned tasks, actual interviews had to commence, and respondents were drawn from the private sector, public sector, civil society organisations, intergovernmental organisations, and academic institutions. The private sector was represented by Wilsons Group (U) Ltd, Kampala Associated Advocates, and Agaba and Muhairwe and Company Advocates. Civil society organisations were represented by Uganda Road Sector Support Initiative, and Advocates Coalition for Development and Environment. Intergovernmental organisations were represented by the International Finance Corporation. Academic Institutions were represented by Makerere University and Kyambogo University. The public sector was represented by the Ministry of Works and Transport, Ministry of Finance, planning and Economic Development, Electricity Regulatory Authority, Uganda National Roads Authority, Uganda Road Fund, Kampala Capital City Authority, Uganda Police, Public Private Partnership Unit, Public Procurement and Disposal of Public Assets Authority, and the National Planning Authority.

A total of 30 people were interviewed, and a person's participation in the study was conditioned on PPP knowledge and experience, and good understanding of road sub sector operations in Uganda. As such, respondents were selected purposively/conveniently or both, and the researcher used his knowledge of the population to hand pick the right respondents. According to Polit and Beck (2010), purposive sampling is often used when researchers want a sample of experts. Equally, the snowball method as a convenient sampling approach, with which early sample members are asked to refer other people that meet the eligibility criteria (Polit & Beck, 2010) was employed. A sample size of 30 respondents was found adequate since most qualitative studies usually use between 20-30 respondents (Mason, 2010). After all, increasing the sample size beyond this level would no longer contribute to new evidence (Ritchie & Lewis, 2003:83).

As already highlighted in this subsection, an interview guide was used to collect responses on research objective six, "the suitability of the PPP environment for developing road infrastructure in Uganda". A set of three questions organised in parts one, two and three of a single interview guide was utilised and wholly applied to each of the 30 respondents during data collection. Part one provided questions about personal information of the respondent with a reflection on the main phenomena of the study. Part two provided questions on the general understanding of PPPs in line with road infrastructure development and strategic implementation of PPP road programs. Part three provided questions on the PPP operating

environment for road infrastructure development with specific interest in the legal and institutional frameworks, PPP road projects' operational potential, investment climate and financial facilities. Detailed interview guide questions can be accessed in the appendix A. For the entire 30 interview cases, the respondents were contacted well before the actual interview, and subsequently reminded a day before its commencement (Holloway, 2004:75). In order to ascertain that a respondent was never forced to participate in the study, he/she had to sign a consent form before the interviewing session could officially commence. With the exception of one interview (refer to subsection 7.5.3), all the interview proceedings were audio tape recorded and brief notes had to be taken as backup. The majority of the interview sessions took an hour while a few lasted as long as two hours. At the end of the interviews, all the recorded voices had to be transcribed into word for data analysis purposes.

7.4 DATA ANALYSIS AND PRESENTATION

The Thesis utilised two data analysis techniques distinctively; systematic review for chapters based on literature review and documentary analysis (2, 3, 4, 5, and 6), and content analysis for interviews based chapters (8). Systematic review is a qualitative analysis method that brings together and integrates findings from existing studies to interpret and provide better understanding of the phenomena or intervention under study (Thomas & Harden, 2008; Harden, 2010: 1-2). Content analysis is a method that "condenses and describes collected data based on the data's context in order to create knowledge and new insights, represent facts and provide a practical guide to action. Usually the outcome of the analysis are concepts or categories of findings for purposes of building up a model, conceptual system, or conceptual map" (Elo & Kyngäs, 2008:108). As for this study, the focus was to develop a model, that is, "the public private partnership governance model". While systematic analysis was undertaken using manual applications, content analysis was undertaken through electrical applications. Given that systematic review (analysis) was conducted simultaneously with collection of data (literature review and documentary analysis), as already discussed in subsections 7.3.1 and 7.3.2 above, this section therefore limits itself to the analysis of data from the interviews.

In the analysis of data from interviews, ATLAS ti, a computer-assisted qualitative data analysis software (CAQDAS), was used. While ATLAS ti can be used for literature review and documentary analysis as well, for this study it turned out unfeasible because by the time the researcher received training on how to use the software (ATLAS ti), literature and documentary analysis based chapters had already been written. Upon completion of transcribing the interview voices (as already highlighted in subsection 7.3.3. above), all 30 transcripts were uploaded into ATLAS ti software for analysis. Advantages of using ATLAS ti lie in its ability to store and retrieve with ease voluminous data/documents of a project in a single environment, and the capacity to meaningfully and in a faster manner analyse qualitative data (Ngalande & Mkwinda, 2014:3) than with manual applications. Critical to the analysis of

qualitative data, according to Bogdan and Biklen (1998:145) the researcher must have the skill to work with and organise the data, break it into manageable units, and synthesise it and search for patterns to discover what is important that needs to be learnt and told to others. Therefore, the main task of the researcher was to make sense of the amount of data collected by reducing the volume of information, identifying significant patterns and weaving them together in a unified and insightful way in order to report on what the data revealed (Best & Khan, 1993:203; Polit & Beck, 2010).

Accordingly, after uploading the transcripts into ATLAS ti software, each of the 30 transcripts was assigned a unique identifier (name). The unique identifiers were in the form of numbers ranging from 1-30, which had to be randomly assigned. The numbers were used for confidentiality reasons, in order that the names of the respondents could not be disclosed. However, each of the numbers had to be linked to a particular sector to which the respondents belonged, in order to establish after data analysis if the responses from the various sectors had similarities, differences, or both. Provided in table 7.2 below are the unique identifiers with the corresponding sectors from which each of the respondents was drawn.

Table 7.2. Matching Respondents to Their Sectors Via Unique Identifiers

Unique identifiers of the respondents	Sector to which the respondents belonged
1	Public sector
2	Public sector
3	Public sector
4	Public sector
5	Public sector
6	Public sector
7	Public sector
8	Intergovernmental organisation
9	Public sector
10	Academic Institution
11	Private sector
12	Private sector
13	Public sector
14	Public sector
15	Public sector
16	Public sector
17	Public sector
18	Public sector
19	Academic Institution
20	Public sector
21	Private sector
22	Public sector
23	Civil society organisation
24	Public sector
25	Public sector
26	Public sector
27	Public sector
28	Civil society organisation
29	Public sector
30	Public sector

Source: Author

The relevance of table 7.2 above is for citing quotes/verbatim from respondents, as used in chapter eight. A citation for any quote must have three layers as generated from the ATLAS ti system. Provided for purpose of illustration, is a citation from chapter 8; "P5, 14:26". Where P (P5) is the page where the quote is picked in a given transcript, 14 is the transcript number (unique identifier), and 26, is the frequency position of a single factor (finding or code) in a transcript based on the ascending order principle.

Subsequent to the assigning of unique identifiers, actual data analysis had to start. Each transcript then had to be read and re-read independently several times for the researcher to familiarise himself with the issues that came out of each transcript; and thereafter the data for each transcript had to be independently coded based on the key issues identified in the transcript. Upon completion of coding all 30 transcripts, coded data had to be categorised into sub themes and later themes based on the commonalities in the codes from all the transcripts (Michelle, 2007:103). Therefore, the findings had to emerge from the frequent, dominant or significant themes/sub themes inherent in the raw data. In a summarised version, the outcome of the analysis was seven themes (findings) which include PPP understanding, PPP motivations, PPP challenges, PPP readiness, PPP prospects, PPP critical success factors, and PPP best practices. A detailed presentation and discussion of the aforementioned findings is provided in chapter 8. In the presentation and discussion of the findings, text (word), pictorial and table formats were used (refer to section 7.5 below, and chapters 8 and 9).

Finally, the findings from literature review and documentary analysis chapters were benchmarked with findings from the interviews to construct a suitable public private partnership governance model for developing road infrastructure in Uganda. Thereafter, a discussion on how the developed PPP governance model works was provided (refer to chapter 9). In the next section (7.5) demographic features of the respondents based on Part one questions of the interview guide (as already highlighted in subsection 7.3.3 above) are presented.

7.5 DEMOGRAPHIC PROFILE OF THE RESPONDENTS

This section contains an analysis of demographic information of the respondents relating to gender, current job positions, academic qualifications, and PPP experience.

7.5.1 Job and Professional Stance of the Respondents

This subsection presents the number of people interviewed per profession and sector, their academic qualifications, and the positions respondents held in their organisations at the time of participating in the study.

Table 7.3. Job Position of the Respondent and Profession Type

Organisation category	Number (NO) against position		Organisation Category	Number (NO) against profession	
	Position	NO		Profession	NO
Private	Chief Executive Officer	1	Private	Engineering	1
	Partner-Legal	1		Legal	2
	Senior Associate-Legal	1			
Civil Society Organisation	Chief Executive Officer	1	Civil Society Organisation	Economics	2
	Research Fellow	1			
Intergovernmental organisation	Investment Officer	1	Intergovernmental organisation	Engineering	1
Public	Commissioner	1	Public	Economics	7
	Assistant Commissioners	2		Procurement	8
	Director	2		Engineering	6
	Deputy Director	1		Finance and Audit	1
	Principal Executive	1		Public relations	1
	Principal officer	1		Legal	1
	Manager	7			
	Specialist	3			
	Senior officer	4			
	Professor	1			
	Senior Lecturer	1			

Regarding academic qualifications, all the respondents had master degrees as their highest qualification, with an exception of five respondents from the public sector (four PhDs and one Doctorate of Business Administration). A few of the respondents had two master degrees, and many with either professional body certifications, postgraduate diplomas or ordinary certificates. While none of the respondents from civil society and intergovernmental organisations had professional body certificates, all 3 of the private sector and 20 out of 24 of the public sector respondents were certified or registered members of professional bodies both within and/or outside the country.

All the procurement participants were certified procurement professionals with the Chartered Institute of Purchasing and Supplies (UK), as well as registered members of the Institute of Procurement Professionals in Uganda (IPPU), and only one of them was a certified PPP specialist. All the Engineers were members of the Uganda Institute of Professional Engineers Registration Board, and with few of them doubling as registered professional highway or civil Engineers in South Africa or UK. All the three lawyers interviewed were members of the Uganda Law society, apart from two of them who were also members of the East African Law society and IPPU. The respondent from the Finance and Audit field was a chartered member of the Association of Chartered Certified Accountants (ACCA) and Certified Public Accountants of Uganda (CPA-U), while the public relations respondent was both a member of the Public Relations Association of Uganda and the Institute of Corporate Governance. Out of the nine economists interviewed, only one respondent was a member of a professional body (a PPP specialist with the Institute of Public private Partnership-USA). From the above description, it is clear

that, whereas massive training and certification in other fields has taken root, there is a serious shortfall in PPP training and professionalization. For instance, out of the 30 respondents, only two were certified PPP specialists, four had attended short course certificate trainings, while the rest of the respondents had neither formal training nor certification in PPPs.

7.5.2 Work Experience of the Respondents

This subsection presents public private partnership experience of the respondents in years, either as practitioners or as researchers.

Table 7.4. The profession of the Respondents and Their Work Experience

Profession Category	Work experience of the respondents in years			Total
	5-10	11-15	16-20	
Engineering	4	2	2	8
Procurement	6	0	2	8
Economics	7	2	0	9
Legal	1	2	0	3
Finance and Audit	1	0	0	1
Public relations	0	0	1	1
Grand Totals	**19**	**6**	**5**	**30**

Table 7.4 above indicates that PPP experience of respondents from the Engineering profession is 4, 2, and 2 in the 5-10, 11-15 and 16-20 years' experience bracket respectively. The PPP experience for respondents from the procurement discipline is 6 and 2 in the 5-10 and 16-20 year bracket. The PPP experience for respondents from the Economics profession is 7 and 2 in the 5-10 and 11-15 year bracket respectively. The Legal respondents' PPP experience is 1 and 2 in the 5-10 and 11-15 year bracket respectively. The Finance and Audit, and Public relations respondents were in the PPP experience brackets of 5-10 and 16-20 respectively. Overall, 19, 6 and 5 of the respondents fall in the 5-10, 11-15, and 16-20 years PPP experience ranges respectively. Whereas all the 30 respondents were knowledgeable about the operations of the road sub sector in the country, PPP experience with road projects, however, was limited. Apart from road sub sector agencies (UNRA and MoWT), PPP Unit, MFPED, PPP Committee, intergovernmental organisation, and a few respondents from PPDA and the Academia, the rest of the respondents seemed sceptical and less informed about the progress of PPPs in the road sub sector in Uganda. Based on the most cited PPP examples by interviewees during data collection, the interviewer noted that PPP experience is more in the Energy sector (especially electricity distribution, and power plant construction and maintenance), housing, and railway sectors than roads.

7.5.3 The Gender of the Respondents

This subsection presents the number of respondents based on their gender.

Table 7.5. The gender of the respondents and their frequencies

Organisation category	Number of respondent per gender	
	Male	**Female**
Private	2	1
Civil Society Organisation	2	0
Intergovernmental Organisation	1	0
Public	22	2
Total	27	3

Table 7.5 above shows that 27 of the participants were males and 3 females. The small number of female participants was not surprising given that Uganda has very few female PPP practitioners compared to males. The unbalanced gender parity for PPPs may be associated with the inadequate self-reliance, confidence and risk taking behaviour by females. For instance, when the government embarked on professionalising public procurement in the early 2000s few females were interested in joining the profession. However, as the profession started to mature more females penetrated the market, and currently female and male public procurement practitioners are almost of equal number in the country. Secondly, apart from the private sector female respondent, the researcher's experience during data collection is that women felt more insecure and more hesitant to share information compared to their male counterparts. Out of the four key female PPP public sector officials contacted, only two participated in the study. However, one of the female interviewees would always remind the interviewer to pause the recording system whenever she felt that the succeeding response, according to her, was sensitive. Meanwhile, the other female interviewee completely refused tape recording, however she was kind enough to have provided enough time (2 hours instead of 1 hour) and papers for the interviewer to write down the responses. As for the two females that hesitated to participate in the study, they equally generously recommended the interviewer to other PPP experts, and also provided some relevant PPP documents to enhance the study. In summary, the differences in gender behaviour may not be unique to this study as corroborated by Buchan, Croson and Solnick (2008:466) who assert that "men trust more than women, and women are more trustworthy than men". One can therefore argue that although males more speedily agree to share information than females, females are, however, likely to provide information that is more accurate when they decide to participate in a study.

7.6 CHAPTER SUMMARY

An elaborate description of the research design, data collection methods, and data analysis used for the study has been provided. In addition, the procedures and processes on how the aforementioned research methodological applications were taken and executed was discussed. Finally, a presentation and analysis of demographic characteristics of the respondents that participated in the study was also provided. Therefore, having presented and analysed the demographic features of the interviewees in this chapter, the next chapter presents and discusses the findings that emanate from analysis of the data collected during interviews on the "suitability of the PPP environment for developing road infrastructure in Uganda".

8 CHAPTER 8: EMPIRICAL STUDY: PRESENTATION AND DISCUSSION OF THE FINDINGS

8.1 INTRODUCTION

This chapter responds to objective six of the study, which investigates the suitability of the PPP environment in Uganda for road infrastructure development. To answer the aforementioned objective, the study conducted interviews with selected PPP practitioners and experts from the public and private sectors, the academia, and civil society and intergovernmental organisations knowledgeable about road sub sector operations in Uganda (See subsection 7.3.3). The collected data was transcribed and subsequently analysed using Atlas ti software to develop findings, as already described in section 7.3.3 and section 7.4. Note that, this chapter does not capture findings about the demographic characteristics of the respondents because they appear in section 7.5 of the previous chapter.

The findings in this chapter emanate from the recurring themes developed out of data analysis. The study anchors data analysis in the ideas located in the interviewees' responses themselves (Green, Willis, Hughes, Small, Welch, Gibbs & Daly, 2007:546), rather than using interview questions as a basis for developing findings. This approach was adopted because, when dealing with multiple questions and voluminous qualitative data (especially with semi structured or unstructured interviews) as is the case with this study, the analysis of data would create coherence in the reporting of the findings when done in a logical rather than chronological manner since findings often overlap within responses to questions. As such, the creation of themes and the structuring of the presentation and discussion of the findings in this chapter is primarily data driven. Upon completion of coding and categorizing data during the analysis exercise, seven relevant and recurring themes were developed. These consist of PPP understanding, motivations, challenges, readiness, prospects, critical success factors and best practices. Findings indicate mixed signs of favourable and unfavourable PPP environments but with unfavourable outweighing the favourable factors, the road sub sector being in the initial stages of PPP planning and implementation, and finally, the PPP knowledge and exposure among the public, private and civil society organisation sectors and among the citizens, for both the lower and the elite classes is very low.

The aforementioned themes with their respective findings are presented and discussed concurrently in this chapter using literature from chapters 2-6, as well as new but relevant information, as provided in the subsequent sections. Given that the frequency of a factor in qualitative research may not necessarily represent its relative importance over others, the study captures all the factors relevant to the study no matter the number of times each appears in the transcripts. Furthermore, the study does not segregate the presentation of the findings according to the different sectors used during data collection because of strong commonalities in the responses provided by the respondents. Reasons that explain the cause for

commonalities in the data are set out hereafter. Firstly, the majority of the respondents were from the public sector (See tables 7.2 and 7.3). Secondly, apart from a respondent who during her entire career worked with the private sector, the rest of the respondents from the private and civil society organisation sectors had for long worked for government before switching sectors. Lastly, the orientation of intergovernmental organisations is mainly about supporting government initiatives, and so are their employees. Given these scenarios, no doubt the opinions of interviewees from the other three sectors could not deviate much from those of the public sector respondents. However, regardless of the differences in sectors of the respondents, the findings take note of any significant divergences in the data. In the next section, the study presents and discusses findings about the understanding of PPP from a Ugandan context.

8.2 THE UNDERSTANDING OF PUBLIC PRIVATE PARTNERSHIP FROM THE PRACTITIONERS' PERSPECTIVE

The respondents associated PPPs with long-term legal and contractual relationships, partnerships, a new procurement modality and a change in public service delivery responsibilities. For example, the expected changes in service delivery responsibilities included participating parties sharing benefits and risks, and the public sector providing clear revenue streams for private sector to realize returns. Furthermore, the private sector must contribute funds and directly get involved in public investments, should assume substantial project risks and handle some of the functions previously performed by public agencies, and may use public assets to provide public services. Like the respondents, theory (refer to subsection 2.3.2.6) and practice express PPPs as a procurement. From practice, for instance, the PIMS for Uganda treats public investments under two procurement options, that is, either PPP or PPDA (refer to subsection 6.3.2 and a pictorial framework in Appendix E). Similarly from theory, Otairu, Umar, Zawawi, Sodangi and Hammad (2014:191) argue that PPP is an "exceptional form of procurement" because of its strong focus on "risk management, value management, integrated design and construction, life-cycle costing, and collaborative relationships".

Whereas the respondents had fair understanding of PPP arrangements as per the aforementioned findings, on the other hand findings show two serious concerns. Firstly, only 4 out of the 30 respondents perceived PPPs from a partnership lens. Secondly, while the PPP policy (Republic of Uganda, 2010:6) refers to PPPs as "medium to long-term contractual and commercial arrangements… ", none of the respondents defined PPPs with a medium term undertone. In fact, the same ambiguities are prevalent in the legal frameworks. A few examples to manifest this are provided. The PPP policy and the PPP Act do not incorporate partnership terminology in the PPP definition. Furthermore, while the PPP policy states that PPPs range from medium to long-term contracts, on the other hand the PPP Act is non-committal on the contract span of PPP projects. Because PPPs should be durational longer than

conventional procurement contracts, and partners must closely work together to share power, skills, assets, risks and rewards (Hodge & Greve, 2017:57; Pârvu & Voicu-Olteanu, 2009:191), therefore, specificity and clarity about the longevity and partnership nature of PPP contracts, whether in practice or legislation, becomes paramount.

In conclusion, the fair understanding of PPPs by respondents alluded to above cannot be generalised to the entire population because the study collected data only from experts and people knowledgeable in PPPs. Actually, findings in subsequent sections of the chapter show a general lack of PPP understanding among the public and private sector players, as well as the citizens. The next section presents and discusses the reasons that would justify adoption of PPP mechanisms to develop road infrastructure in Uganda.

8.3 MOTIVATION FOR PUBLIC PRIVATE PARTNERSHIP ADOPTION

Large infrastructure deficits, especially in the road sub sector in Uganda causes inadequate service delivery to the citizens (Mawejje & Munyambonera, 2017:2; Mawejje & Okumu, 2016:455). According to the World Bank Group (2012), PPPs have the potential to unlock infrastructure gaps, improve operational efficiency and growth, and reduce poverty. This section, therefore, presents and discusses findings on the motivations for PPP road development in relation to social welfare, government financial constraints, private sector potential, and road development problems.

8.3.1 Social welfare and Government financial constraints

Across the world, governments anticipate mammoth society benefits from PPPs (Alinaitwe & Ayesiga, 2013:1). Uganda's PPP policy (2010:5) articulates the objectives of PPPs to be cost effective delivery, good quality services, clear customer focus, enhanced service diversity, enhanced incentives, better asset utilisation, and delivery of more projects and wider economic benefits. Willems and Van Dooren (2016:200) argue that public infrastructure with high budgetary and social impacts, such as roads, are best suited for PPPs. Like the aforementioned assertions, the study findings equally indicate that the government motive for PPP road projects emanates from the social welfare and government financial/economic constraints.

8.3.1.1 Social welfare

Respondents suggest that the government would want to improve people's livelihood by improving road transport services and systems for road users, the private contractor making profits, and the PPP roads providing opportunities for improving social and economic systems of communities for the residents (along or in the area where the road is situated). On the other hand, although Rouhani, Geddes,

Gao and Bel (2016:94) indicate that road toll fees have the potential to pay off all the road development costs for the public sector, the respondents insist that the private sector can only recover its investment costs through cost sharing between the government of Uganda and the direct road users.

8.3.1.2 Government financial constraints

All the respondents stressed that PPPs are emerging as a priority because the government is financially constrained. In support of this general view, two respondents argue that, *the traditional financing sources such as donations have drastically declined, the grants have completely dried up, government financial resources are insufficient, loan financing from multilateral institutions (like WB, DFDB) is also limited.* (P1&2, 27:3); and because, *the government has no funds, they think taking that route they can get funding?* (P2, 19:3). The financial constraint factor is exacerbated by a huge fiscal deficit and increasing public debt. While the domestic revenue increased from UGX.2.6 trillion in FY 2006/2007 to UGX.13 trillion (a 17% average annual growth rate) in FY 2016/2017, the national budget, however, would be financed without borrowing if the government collected UGX.30 trillion annually in domestic revenue (Minister of Finance, Matia Kasaija, as cited in Patriot Magazine, 2017:6). This implies that the government has an annual gap of UGX.17 trillion in domestic revenue. Similarly, between 2006 and 2016 the country's public debt increased from US$2.9b to US$8.7b (5.5 external and 3.2 domestic debt) (National budget, 2017/2018:40).

Consequently, the government perceives PPPs as an easy way to finance road development (especially through direct user tolls) because, according to findings, it can reduce strain on the national budget, reduce direct government borrowing, and minimise advance payments to contractors. Therefore, alternative means of financing through PPPs would enable cash strapped governments, like Uganda, to deliver high quality public infrastructure without increasing public debt/taxes or constraining national budgets (Siemiatycki, 2013:4). Note that pressure on public sector budgets, debts and taxes is minimised if the repayment of private sector finance is entirely pegged on direct road users without government subsidies or guarantees. However, because of high levels of unprofessionalism especially corruption in most countries, advancing PPPs for budgetary pressure reliefs without continuous monitoring by qualified and committed authorities may lead to inadequate application of PPPs (Mihai, 2012:509).

Regarding the advance payments factor, the government spends a lot of money on advance payments to contractors as a requirement for road constructions to commence under conventional procurement. According to the PPDA (contracts) regulations (2014:464, Sec. 44(3)) an advance payment up to a maximum of 30% of the contract price may be allowed. Surprisingly though, even when government makes prompt advance payments, contractors still fail to complete road construction on time (Aluonzi, Oluka & Nduhura, 2016:550). However, with the PPP modality, advance payments can be minimised

if not completely avoided. This position is affirmed by a respondent who states that, *you can actually deliver a PPP solution without putting money ahead to the contractor.* (P2, 20:7).

In summary, PPPs seem the best alternative for Uganda given the financing limitations discussed above, however, they will become vital when the private sector is able to extend better long-term financing compared to other options available to government and/or can secure the necessary financing faster than government could afford (Alinaitwe & Ayesiga, 2013:2).

8.3.2 Private sector potential

According to the respondents, PPPs are appealing to government because the private sector: is more innovative than the public sector, assumes substantial project risks, has a reliable and adequate financing source, aims at providing efficient and innovative products, has a flexible operating environment, has a wide range of skills, and practices customer service excellence. As such, the government of Uganda would want to tap into the private sector's expertise and advanced delivery and financing mechanisms to deliver better quality infrastructure services timely and at competitive costs (PPP Policy, 2010:3; Ong'olo, 2006:13). In Canada, for example, the majority of the governments boast of PPPs constantly delivering innovative and high quality infrastructure projects, within budget limits (Siemiatycki, 2015:356). Unlike government, the profit motive seems to drive the private sector to aim for public service delivery excellence. Backing this notion are two similar views from two respondents: *The private sector ensures project risks are properly managed so that profits are made and losses avoided.* (P2, 17:6). For example, *the private sector is cautious about project timelines, because any project delays causes cost overruns and reduces profits on their part.* (P2, 14:8).

Furthermore, respondents suggested that while the private sector complements government efforts, the private sector on the other hand finds public infrastructure a more viable source of investment. According to Siemiatycki (2013:5), for example, pension funds and insurance companies are searching for long-term investment opportunities that can provide them stable and predictable returns. In fact, the growing interest of the aforementioned financing institutions in PPP projects emanates from the need to match their long-term liabilities or obligations with long-term investments, as well as to diversify their investment portfolios (Li, Abraham & Cai, 2017:406)

8.3.3 Road development problem

The whole of chapter five discusses road development in Uganda, and key areas of reference for this subsection are figure 5.5, and subsections 5.4.1 and 5.4.2 of chapter five. Based on the interviews, findings suggest that road development in Uganda is entangled with high costs, a gap in road physical stock and quality, and time lags. The aforementioned findings are unpacked as follows.

Regarding the high cost problem, findings indicate that the government finds it expensive to manage road facilities, difficult to put a stop on cost overruns, and the financing for road maintenance has never been adequate. According to Byamugisha and Basheka (2016:9), between July and December 2014 only 650 km and 20 km national roads received routine and periodic maintenance respectively, against the target of 3000 km and 100 km respectively; furthermore, only 678 km of national unpaved road had periodic maintenance against a plan of 2225 km. This is a sign of poor prioritization of road maintenance, as well as *the government having many competing needs against a small financial resource envelope.* (P1, 14:5). On the other hand, cost overruns have been predominant in the construction of road projects due to unprofessional behaviour between government and private sector officials. For instance, the construction of a single lane kilometer for the KEE project cost US$ 2.315m, yet it costs between US$ 800,000 and US$ 900,000 to construct a double lane kilometer for a highway with similar pavement structures in other East African countries (Auditor General, 2015, as cited in Mawejje & Munyambonera, 2017:15). Such construction costs are extremely high by international standards.

With reference to the road stock and quality gap problem, findings suggest poor road maintenance, a huge deficit in paved roads, substandard roads, and a huge road backlog countrywide as a result. As of 2017, only 3.52% of the total road network in the country was paved (see subsection 5.4.2). This implies that 96.48% of the total road is unpaved, hence in a very low quality state. What is worrying though, is that even the few paved roads constructed, have often been criticized by the citizens as being in a "bad state" or to have "developed potholes" a few months into their usage (Byaruhanga & Basheka, 2017:32&39). Furthermore, Uganda lacks a maintenance or repair culture. For example, a respondent noted that, *setting aside funds for road maintenance does not happen, and if it happens, whenever there are budget deficits it is normally the maintenance budget that is cut* (P2, 19:5).. In order to increase road maintenance financing, and the quantity and quality of road infrastructure, fundamental changes and reforms must then take place within the public transport sector (Paget-Seekins & Walters, 2016:277).

Finally, regarding the time lag problem, the findings indicate that the government would want to reduce the current prolonged travel time on ordinary roads, as well as construction delays. Regarding prolonged travel times, for example, the average vehicle travel time increased from 2.4 min/km in 2014 to 2.9 min/km in 2017 for Kampala (refer to subsection 5.4.2). Meanwhile, with construction delays, for example, the construction of the Northern By-pass road took "more than 5 years instead of two and half years" (Alinaitwe, Apolot & Tindiwensi, 2013:33), and nationally road construction delays approximately cost the taxpayer over UGX. 2.5bn every month (Byaruhanga & Basheka, 2017:32).

In summary, this section indicates that government financial constraints, physical road development problems and private sector potential are the main factors steering the impulse for PPPs in the road sub sector in Uganda. The next section presents and discusses PPP challenges for developing road infrastructure in Uganda.

8.4 CHALLENGES OF PUBLIC PRIVATE PARTNERSHIPS

Although there was a specific question that targeted challenges, the respondents raised PPP challenges on almost every question of the interview guide. Based on the analysis outcomes and for better presentation and discussion of findings, PPP challenges were organised in nine themes. The themes are macro-economic, financial, government, legal, land, perception/misconception/myths, political, project planning and management, and national labour/private sector challenges. Each theme is further organised into related subthemes, as presented and discussed below.

8.4.1 Macro-economic challenges

Findings link macro-economic challenges to Uganda's unfavourable global credit rating and poverty levels. By definitions, credit rating refers to the likelihood of a country to timely service its debt or meet its payment obligations in the future (Haque, Mathieson & Mark, 1997:10), and poverty is a situation where an individual's consumption set is severely constricted or is below a certain level (e.g. the poverty line) (Goedhart, Halberstadt, Kapteyn & Van Praag, 1977:504). A study on the effects of country risk and conflict on infrastructure PPPs, Araya, Schwartz and Andres (2013:9-10 &17) established that country credit ratings are a reliable predictor of PPP investment levels in developing countries, but also noted that poorer economies attract less private sector participation in public infrastructure development. In fact, the lower the credit rating of a country the lower its creditworthiness, and the less command over resources of an individual the lower his/her purchasing power and welfare, and the reverse is also true.

Several factors determine credit rating and poverty, however, interviewees mentioned a few deemed specifically applicable to Uganda's situation. Findings associate credit rating risks with depreciation of the local currency, inflationary pressure, foreign exchange risks, and low domestic revenue; while poverty is associated with a high unemployment rate and low per capita income. Given that domestic revenue is already presented in section 8.3.1 above, in this subsection discussions on credit rating challenges, therefore, will be limited to inflation, local currency and foreign exchange risks. According to Moody's country credit rating of August 2017, Uganda's creditworthiness was predicted to be highly speculative (B2 rating). Evidence shows that inflation progressively increased from 3.08 in 2014 to 5.42, 5.46 and 6.4 in 2015, 2016 and 2017 respectively (UBOS, 2017:1; National budget, 2017/2018:10). Furthermore, the foreign exchange rate (in US dollar) increased from UGX. 2575 to

3618.70 between F/Y 2013/2014 and 2016/2017), translating into a 40.5% depreciation in the local currency value (National Budget 2017/2018:27; National budget speech, 2013/2014).

As a stopgap measure to the foreign exchange problem alluded to above, the MFPED issued a policy circular in 2016 directing public entities to ensure that all domestic contracts are awarded and paid in the local currency. Unfortunately, in a way government still pays for foreign exchange instabilities because potential bidders assess the volatility of the foreign exchange and factor that into their bid prices. In agreement with the findings, but without segregating macro-economic factors, KPMG (2017:2) attributes Uganda's high credit risk rating to low per capita income (refer to section 1.1), a small economy, deteriorating debt affordability (partly due to growth in non-concessional borrowing), weaker competitiveness compared to "B2" peers (e.g. Kenya), institutional weaknesses, and a rise in domestic political risks.

Additionally, whereas the average poverty line statistics show a great reduction in poverty (see section 1.1),in real terms and by international standards, however, the majority of Ugandans are still very poor, since the biggest share of the national income is possessed by a few people. This is reverberated by a respondent who states that, *the biggest part of the Ugandan population is in the low-income bracket, and this may affect revenue stream, which is the lifeline of PPP* (P4, 27:10). In addition, notwithstanding the fact that the government has recently taken strides in industrialising the economy in order to create more jobs, there is still widespread unemployment in the country (National budget F/Y, 2017/2018:131). In summary, macroeconomic challenges will affect the bankability of PPP projects, and may deter private sector participation, if not attracting only mediocre private companies.

8.4.2 Financial challenges

Financing institutions are important reagents in the mobilisation and allocation of scarce financial resources for desired development activities (Nannyonjo, 2002: ix), not only for Uganda, but other countries as well. Following the interview responses, the study categorises financing institutions as commercial banks, capital markets, pension markets and insurance markets. A presentation and discussion of the PPP challenges under the four financing institutions is provided below.

8.4.2.1 Local Commercial Banks

The respondents described the local commercial banks as too weak because they lack financial capacity and are less liquid, charge high interest rates on loans, and demand prohibitive collateral securities. Although commercial banks possess about 75% of the total financial assets in Uganda, the country's formal financial sector remains one of the least developed in SSA (Musinguzi & Katarikawe, 2001:20). The implication is that financing institutions in Uganda generally have capacity challenges.

Information from government documents indicates that the average interest rates on loans from commercial banks always rotated around 20.1% to 24.6% from 2013 to 2017 (National budget F/Y, 2017/2018:206; BOU, 2017:23). From a respondent's perspective, *if you go to a bank, by the time you get a loan out you are at about 30% interest. Yet, our profit margins are usually between 10-15%* (P12, 12:54). This implies that commercial bank borrowers make investment losses since they earn between 10 and 15% profit but pay about 30% in loan interests. Globally, these are one of the highest interest rates on borrowers. In light of the aforementioned interest rates problem, local companies cannot compete favourably with foreign firms because of the high costs of financing. For example, the dominant foreign road construction firms in Uganda, *the Chinese companies, are able to get loans at or under 2% interest* (P13, 7:56). It is noted that the discrepancy in interest rates information between respondents and government reports, as already highlighted in this paragraph, is due to a number of reasons. Key among them are that commercial banks are at liberty to charge varying interest rates (but must remain within BOU thresholds), varying official loan processing fees on clients, and the common complaints about the hidden lending costs by banks, as well as the illegal payments from borrowers as tokens for bank officials to process loans faster than usual.

From the liquidity perspective, Kamukama and Tumwine (2012:42) conducted a study on the liquidity threat to Uganda's commercial banks, and established that the liquidity position of commercial banks was deteriorating. They, for example, indicated that between July and December 2011 commercial banks had experienced a 15% decline in the number of loan transactions due to the deteriorating liquidity trends. Meanwhile, with the collateral security aspect, Kasirye (2007:12) conducted research on rural capital markets in Uganda, and established that unfavourable collateral security requests, such as a preference for land with title deeds over land without titles, reduced chances of a household accessing a loan by 10%. Indeed this seems unrealistic because about 80% of the land in Uganda does not have title deeds. In summary of this subsection, at the moment the local commercial banks are inadequate to directly participate in road PPPs on their own and/or lend at fair rates, and for private companies to profit from projects of this nature.

8.4.2.2 Capital markets

Capital markets are a section of financial markets where long-term securities (in financial or property mode) are traded either through physical or electronic exchanges. In Uganda, the Uganda securities exchange is the only market licenced by the Capital Market Authority where private, public and government entities trade equity and debt stocks/securities. Like other countries, banks dominate the capital market in Uganda. Examples of such stocks, among others, are bonds, shares, asset securitization, loans, debentures, treasury bills, commodity futures, mortgages and leases.

The study findings indicate that capital markets in Uganda are too weak financially and have very few long-term financing stocks/securities options for both investors and borrowers. Such capital markets status delivers minimal benefits, increase national budgetary costs, and reduce private sector investment (Kitabire, 2006:100). For instance, a respondent who was investing in securities markets expressed his dissatisfaction as follows: *I have shares in Stanbic bank but when I look at the money, it does not grow* (P15, 1:99). In contrast with Uganda's situation, South Africa has had successful PPP road projects partly because of a well-capitalised stock market that is worth almost twice the country's output (Hassan, 2013:1). It is, therefore, posited that well developed capital markets in a country, as Kahn (2006:70) argues, contributes to financial market deepening, finances fiscal deficits, and minimises foreign exchange risks because of borrowing in domestic currencies.

In many respects, the capital markets in Uganda have a long way to go in order to participate effectively in PPP projects. Firstly, few entities (only 17) are listed on the Uganda securities exchange, and secondly, their total capitalisation is as low as US$ 1.1bn (KPMG, 2017:2). Thirdly, between F/Y 2014/2015 and 2015/2016, and between June 2016 and June 2017, their respective equity turnover reduced from UGX. 310bn to UGX. 188.17bn, and from UGX. 204.3bn to UGX.117.5bn (BOU, 2017:43; BOU, 2016:29). In the same periods, their share volumes also reduced from 1848.1m to 1030.6m, and from 1230.7m to 1111.1m respectively (BOU, 2017:43; BOU, 2016:29). All these examples are manifestations of capital market underperformance and underdevelopment. Borrowing from Mugume (2007:16), it is reiterated that capital markets in Uganda, given their current form, cannot have a tangible impact in providing long term financing for PPP road projects.

Finally, in a book titled Africa in the World Economy, in a chapter investigating capital market development in Uganda, Kitabire (2006:100) points out four important considerations of revitalizing the capital markets business in Uganda. These are, increasing the number of financing institutions holding long-term liabilities to join the supply side, increasing investor competitiveness for long-term securities, prioritizing capital markets where there is need for financing fiscal deficits, and reforming the pension market and expanding the microfinance sector for more participation.

8.4.2.3 Pension and Insurance markets

In contrast to the practice in the developing world, the pension and insurance markets are becoming some of the largest financiers of PPP projects for the developed economies. Uganda is a good example of a developing country whose pension and insurance sectors have not shown interest in PPPs, amidst the emerging PPP investment opportunities in the country. In this regard, a number of reasons may explain the behaviour of Uganda's pension and insurance sectors. Based on the interviews, findings suggest that both the insurance and pension markets are generally too weak and immature to invest in PPPs. The respondents justified their position by highlighting that both the pension and insurance

companies have limited financial capacities and lack enabling laws for PPP investment. Note that, on the issue of financial capacity, while all the respondents stated that insurance companies have financial limitations, on the other hand, the pension market received mixed responses (only three respondents insisted that the sector lacks financial capacity). This is explored further in subsection 8.6.2.2. Furthermore and specific to the pension market, the findings suggest that there is a lack of a well-liberalised pension market, and that the private pension scheme market was under a monopoly of a single firm, the National Social Security Fund (NSSF).

While BOU (2017:45&46) states that insurance companies have been good at risk assessment and mitigation, it also acknowledges that fraud and cyber risks are emerging threats to the insurance sector. Turning to the pension sector, the NSSF in particular has had critical governance challenges in the past. To mention but a few cases: the purchase of land at inflated prices and without following procurement procedures (e.g. Land at Nsimbe and Temangalo), the irregular sale of bonds a few weeks from maturity, the buyout of loans that caused financial losses (e.g. from Uganda Clays Ltd), the embezzlement of funds by managing directors (e.g. Chandi Jamwa and Leonard Mpuuma), and conflict of interest and political interference in the operations of the Fund (Asiimwe, 2013:133&134; Rwakakamba, 2014). This is corroborated by a respondent who argues that, *subscribers may highly resist NSSF financing PPP road projects because the past long-term investments were tinted with fraud and loss of members' money* (P18, 23:50).

Generally, the pension markets in Uganda are infiltrated by "poor governance, fraud, technical incompetence of trustees and key officers, inefficient administrative systems, poor quality of data and inadequate proficiency of Fund managers" (BOU, 2017:45). While it is agreed with Mugume (2007:16) that the pension system in Uganda is very weak at long-term financing, it is also submitted that, so is the insurance sector. No matter the challenges discussed above, the writer argues in favour of the pension and insurance sectors as having the potential to enable PPP investment (if well managed) compared to other financing institutions of the economy. Figure 8.1 below shows the financing institutions in Uganda.

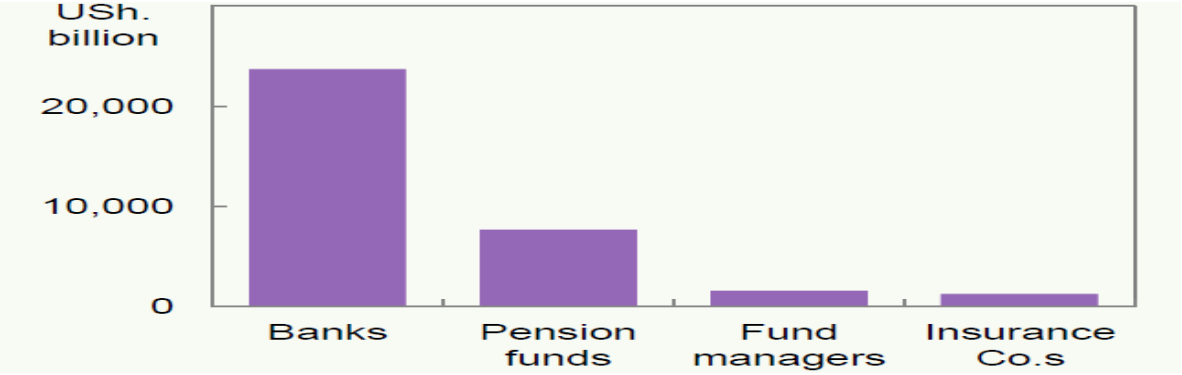


Figure 8.1. T**otal Assets for Financing Institutions in Uganda as at December 2016**

Source: BOU (2017:46)

Notwithstanding the financial standing of institutions in figure 8.1 above, and based on the Ugandan situation, pension funds and insurance companies can be better PPP investors than local commercial banks and fund managers. This argument is based on two fundamental grounds. On the one hand, the pension fund (NSSF) holds more stable long-term liabilities than commercial banks, because under normal circumstances NSSF pays off clients when they reach the age of 55 years, while banks heavily hold depositors' money that can be withdrawn by the client a few hours after the time of deposit. On the other hand, insurance companies practice better corporate governance principles than fund managers. Unlike insurance companies, fund managers tend to be micromanaged because their membership are individual organisations or association specific.

8.4.3 Government challenges

Based on the views of the respondents, this study further sub-grouped government challenges into unprofessionalism/unethical conduct, limited PPP capacity of PPP Unit and PPP Committee, and limited PPP capacity of public sector road agencies.

8.4.3.1 Unprofessionalism/unethical conduct

A study conducted by Sabiiti and Muhumuza (2012:2039 & 2040) on the trends, challenges and opportunities of public procurement in Uganda, shows that between FY 2007/2008-2010/2011, the PPDA Authority arbitrated 88 procurement cases because of unethical practices, lack of professionalism, and incorrect application of the procurement law by both bidders and public officers. Likewise, the application of the PPP law in Uganda today seems to follow the same cycle. Based on the interview responses, findings indicated lack of creativity in public entities and non-compliance to principles of good governance, as elaborated on below.

The findings link lack of creativity to inflexible and bureaucratic public sector systems. This problem, according to the respondents, is partly attributed to failure by the government to reward innovative practices. In return, the commitment of public officers towards government interventions becomes undermined. For example, a respondent narrates that, *a man leaves a jacket on the chair for one week, and just dodges to engage the private sector* (P15, 20:64). Such behaviour not only frustrates potential investors but also leads to late release of funds (which causes delays to projects and payments to contractors). The findings also suggest that lack of commitment has caused imitation syndrome by the government, and overreliance on the private sector for project initiation, as reflected in the following two quotes respectively: *Uganda is just experiencing the bandwagon effects. If other countries are doing it, we also end up doing it, and because the World Bank is promoting it, then it is taken to be a suitable practice for Uganda.* (P2, 18:5); and, *Most of the PPP project concepts have always come from the private sector themselves because government has not been proactive* (P6, 15:20). Whereas imitation and multilateral involvement (such as World Bank) may pose challenges, they can also, however, extend opportunities when implemented in context of a country's situation. In fact, standards for multilateral organisations have proved effective worldwide, especially to countries that lack or have weak standards in certain aspects of public interest.

Furthermore, findings link non-compliance to principles of good governance with bribery and corruption, compromised competition and transparency, and limited honesty by the citizens. Regarding corruption and bribery, both the private and public officers directly perpetuate this problem, as indicated in the following two verbatim respectively: …*someone brings in a project and really you see its not national interest that is coming first, but what will be their "cut" or benefit* (P10, 12:48); and ...*private companies provide bribes to public officers in order to win tenders* (P5, 22:27). From the competitive principle perspective, competition in both project procurement and financing has been a challenge (e.g. with the KEE project), as reflected in a statement from a respondent that *contractors are never selected...through international competitive bidding, and the source of financing is not secured through logical competitive means on certain projects* (P8, 16:32) [sic]. In fact, of late foreign investors have competition prohibitive demands. For example, *Chinese companies insist on using Chinese financing and road construction models* (P11, 27:38); and, *road projects where the government of China provides loan financing, it would normally want these projects executed by Chinese companies* (P1, 17:3). Such conditions not only undermine competition but also the ideals of pure PPP models.

Like the principle of competition discussed above, transparency has not been any better: *Sometimes government is very secretive. …when we are seeking for information about PPPs from responsible people, they think the information is confidential. Countries that have had successful PPPs, even PPP contracts are public documents. But here a whole parliament begs to access a contract signed between the government and private partners* (P2&8, 19:36). However, the transparency problem seems

universal, as McGrath, Cisarova, Eger, Gallop, Kalmar and Vera (2008:16) argue that "even countries with more developed freedom of information culture, information about PPPs is hard to come by" (also refer to subsection 3.3.1.6). Practically though, keeping project information secret may cause PPP opposition from the public because, *when people begin to speculate, even wrong information around projects ends up being believed by the public* (P12, 23:34). Finally, the general dishonesty by citizens especially during data collection for PPP considerations is becoming a big hindrance, as evidenced by a respondent who argues that, *my experience with Uganda is that few people will tell you what they think. They will look at you and ask what does he want, and they will exactly give you the answer they think will make you happy* (P4, 12:17). Accordingly, this affects effective decision-making since wrong information will be relied on, for example, when determining the viability of implementing a proposed project either as a conventional or PPP project.

In summarising this subsection, the findings presented and discussed above suggest that the private sector players, public officers, citizens and the government as a whole are ethically not doing enough, as far as PPP support is concerned.

8.4.3.2 Limited capacities of the PPP Unit and PPP Committee

According to Regan (2012:2) the PPP Unit must have personnel with a good understanding of commercial and capital market issues and with experience and technical skills across disciplines, and must work collaboratively with PPP implementing agencies to deliver PPP policy objectives. Actually, given the mandate of the PPP committee (refer to subsection 6.2.2.2), the above requirements likewise apply to the PPP committee. Based on the response from the interviewees, though, Uganda's context seems to be in direct contravention of Regan's dogmas.

Findings show that Uganda's PPP Unit is inexperienced, understaffed and with too many skills gaps, and lacks public visibility. Additionally, whereas the PPP committee membership is fully constituted (as per the law), on the other hand findings indicate that the committee generally lacks the required skills set and experience to do its job effectively. Accordingly, such problems have contributed to delayed PPP approvals, processes and project implementation. On the PPP Unit visibility challenge, an example from respondent is provided as follows: *When the ministry of Defence (MOD) advertised for a transaction adviser for the PPP housing project for Uganda Peoples Defence Forces (UPDF), the PPP Unit wrote to MOD informing them that they had not registered the project with the Unit, and that they could not proceed without first meeting that legal requirement* (P7, 1:53). This implies that the MOD may not have been aware about the existence of the PPP Unit nor its roles. In fact, the limited awareness about PPP structures and systems is not only a problem to the public sector but to the private sector as well.

Finally, on the understaffing and skills gap of the PPP Unit respondents stated that, *the PPP Unit is very weak because it has a team of only three employees inclusive of the acting Director. This staff cannot ably serve the PPP needs for the various entities in the country, because they are overwhelmed with administrative work* (P9, 2:40; P8, 22:37) [sic]. Secondly, contrary to section 10 (3) of the PPP Act (2015) which states that "the Director and staff of the PPP Unit shall be competitively recruited and appointed", all the staff of the PPP Unit had been employed on a secondment basis from MFPED departments. This means that the PPP Unit never even had a single staff member of its own. Regarding the PPP skills, *the PPP Unit lacks very good financial and legal analysts, and depends on the assistance of development partners for most of its work* (P3, 13:13), among other skills. In concurrence with a respondent's view, this study concludes that, *the PPP Unit which should be the center of PPP technocrats on the government side, three years down the road from the time of its creation, is still limping and cannot do its work effectively*. (P9, 26:30).

8.4.3.3 Public Sector Road Agencies possess limited PPP capacity

According to McGrath *et al.* (2008:16) capacity within contracting authorities, whether in terms of trained and knowledgeable human resources and/or perfect systems, remains highly essential in the development of PPP programmes and projects. In Uganda's case, neither staff nor system capacities would be factors to rely on for PPP road projects, because they are either non-existent or too inadequate. Based on the interviews, the study established a number of PPP human resource, PPP structures and systems, and risk management capacity challenges, as summarised in figure 8.1 below.

Table 8.1. Public Private Partnership Capacity Challenges for Public Sector Road Agencies

PPP Human Resource Capacity		**PPP Risk Management**	
1	Limited investment in capacity building	1	Poor risk allocation
2	Lack of PPP staff	2	Poor drafting and management of PPP contracts
3	General lack of basic understanding of PPPs operations among staff	3	Insufficient public awareness about the proposed PPP road projects
4	Lack of internal negotiation specialists	4	Limited compliance with safety and social standards
5	Lack of PPP technical skills	5	Public concern over tolls making road usage restrictive and expensive
6	Limited technological skills	6	Lack of experience in PPP road projects
PPP Structures/Systems			
1	Limited institutionalization and functioning of PPP structures		
2	Lack of a Project Development Fund		
3	Lack of PPP Sub-Units (cells)		
4	Low adaptation to new technological advancements		
5	Lack of a comprehensive PPP Database		

Source: Author

The above challenges manifest a lack of internal capacity to structure attractive projects, procure, negotiate, and manage PPP contracts by government, which contribute to the ongoing slow progress of PPP road projects in the country. Evidence from a respondent indicates that, *UNRA is still structuring the KJE road project, yet they should have procured the SPV Company by now* (P4, 13:16). Provided below is a brief discussion on each of the three categories of findings highlighted in figure 8.1 above.

On the human resource challenge, whereas a few people have made personal efforts to attain PPP academic qualifications and to attend a few government organised PPP workshops, there is still microscopic PPP capacity in road agencies. For instance, UNRA (an agency responsible for construction of national roads) and the MoWT (that supervises the transport and works sector), *do not have the prerequisite knowledge, competences, skills, technology and exposure* (P5, 16:18; P5, 8:19) [sic]. Actually, government adopted the PPP model before building capacity and to date has not done enough to train existing staff, nor create the necessary awareness about PPP structures, processes and procedures provided for in the PPP laws. Although road agencies largely outsource consultants such as transaction advisers to bridge the gap, however, without internal capabilities to check the validity and viability of their advice, project success is crippled.

With the PPP structures challenge, contracting authorities have not yet formed committees or teams responsible for project screening, preparation, and for handling internal project approvals, in addition to lack of a PPP Sub-Unit or cell whose role would be to coordinate PPP processes at the road agency level. Furthermore, while the PPP Act (2015, Sec. 29) provides for the creation of a Project Development Fund to finance project preparation activities, this has not been formed yet. Lack of such a fund has serious PPP implications, as a respondent explains: *we do not have ready and well-prepared projects that can attract private sector investment because we lack funds to do so* (P4, 2:22). [sic].). As for technological capacity, it is not only a problem to the government but also to the national private sector. For example, *with the 1.5 km suspension bridge that was constructed in the middle of a swamp on KEE, we could not get people with the required technology locally* (P14, 26:49) (See figure 8.2 for pictorial evidence).

Finally, regarding the risk management challenge, the government often gets bad deals because of poor risk allocation and management. To begin with, as the government of Uganda plans to introduce PPP toll roads for the first time, massive sensitization and creation of awareness for people to embrace road toll payment becomes critical. Otherwise, short of changing people's mind-sets, PPP toll road projects may turn out to be unviable to both the government and the private sector. Evidence is drawn from a respondent who says, *I hate paying tolls, but with a justification, for example in a terrible jam, I would be willing to pay UGX. 2000 to and from Kampala and Jinja.* (P7, 9:23). This implies that people with similar behavioural traits would only use a toll road during emergencies, because the distance and payment amount referred to is about 154kms for almost half a US dollar. Furthermore, provided below are summaries for three PPP projects that in one way or another have been poorly structured, negotiated, and/or whose contracts have been poorly drafted or managed.

The KEE project

The company to undertake the operation and maintenance contract will be very different from the company that executed the design and build contract. The government fully financed the designing and construction phase of the project through government revenues and a bank loan. At the end of the project construction phase the government must fully pay the construction company, yet loan repayment will have to continue into the maintenance and operation phase. Based on the structuring of the project (refer to subsection 5.5.1), as a respondent explains, *if there are any design or construction issues, the government is likely to still foot the bill because the operation and maintenance company will not accept to be in charge of those risks* (P3&4, 19:13). This signifies a poorly conceptualised project and drafted contract, which has serious future cost implications to the government of Uganda compared to the private sector partners.

The Motor Vehicle Inspection project

In 2015 the MoWT contracted Societe Generale de Surveillance (SGS) to build vehicle safety inspection facilities and subsequently inspect motor vehicles on behalf of government. This project had many PPP loopholes, which include: provision of an exclusive contract to a single firm to inspect vehicles throughout the country, unspecified recovery financial amount and expiry time for the contract, and the contract gives the company discretionary powers to revise vehicle inspection fees based on consumer price indices published by UBOS. Not surprisingly, in February 2018 the parliamentary committee on physical infrastructure recommended for contract termination citing conflict of interest and fraudulent practices.

The Kalangala Infrastructure Services Project

The project combines the provision of road, ferry, tap water and electricity services for Bugala Island community in the Kalangala district. A respondent explains one of the recent problems in the management of this project as follows. *By the time we* (MoWT-as the managing public entity*) negotiated last year inflation was down and we thought we were going to pay UGX.15bn to the private partner, but because of an increase in inflation this year, we are now going to pay UGX.27bn for exactly the same amount of service* (P3, 15:8). As such, the project was becoming expensive to government partly because the private partner effectively considered inflation at negotiations and contract formulation, something the government on its part underestimated.

8.4.4 Land challenges

Given that Uganda's land issues were discussed in detail in subsection 6.3.5, the discussion of land challenges in this subsection is therefore limited to the interview outcomes. The respondents unanimously cited land acquisition delays as a hindrance to PPP road projects and ordinary roads as well. The interviewees associated land challenges with causes and effects of land acquisition delays. Similar to the land issues discussed in subsection 6.3.5, findings suggest causes of land acquisition delays to include land disputes, land litigations and prolonged court procedures, exaggerated land values and expensive compensations, delayed land compensations, and a weak land tenure system.

Other critical land acquisition concerns in Uganda, but hardly mentioned by the respondents, include encroachment on road reserves and lack of land titles by some land occupants (which delays the land verification exercise). Furthermore, crooked behaviour has cropped up where people rush to buy or develop land on corridors proposed for government projects, expecting higher pay from government, while some landowners deliberately decide not to turn up for land valuation exercises and only emerge during road works to then demand exorbitant rates. The aforementioned land challenges not only delay

projects (in terms of commencement, halting construction works and creating extended completion time), deter private sector investment or participation, but also disrupt businesses, livelihood, and the social fabric (for the displaced people and contractors as well).

Using the examples of KJE and KEE, the two road expressways have partly had implementation frustrations because of land acquisition challenges, as provided in the following narratives. Lack of enough money has created delays in the structuring of KJE, as affirmed by a respondent who states that, *because the government does not have all the money required to pay for the entire land at once, we are structuring the KJE project in a phased manner based on the portions of land we have so far acquired* (P3, 22:14). Likewise, delayed land payments for KEE have hiked land compensation values to more than double, as a respondent says, *with the 2009 land valuation for KEE we had budgeted to pay $100m but it's now about $250m because many people were not compensated on time* (P14, 16:63). Relatedly, land disputes among people prohibit government from effecting land compensations, even when it has the money to do so. For instance, *….the King of Buganda (through the Buganda land Board) and the family of the former king Daudi Chwa are fighting over land ownership on one of the stretches of KJE….and because each of them claims to be the true land owner, the government cannot proceed with compensation to secure right of way* (P3, 6:7). Finally, many projects are never completed on time mainly due to disputed government land valuations by landowners, for example, *KEE should have been completed in 2015 but construction is still ongoing simply because people disputed land values and went to courts, and others exaggerated their land values* (P8, 27:26).

Drawing from the above discussions, it is noted that land challenges result mainly from land ownership uncertainties, and compensation disagreements between government and landowners. While compensation disagreements occur more often than land ownership problems, land ownership conflicts are, however, more complicated to solve on the part of government because government is just a third party to the conflict. Finally, land acquisition for government projects in Uganda is complicated because land belongs to individuals and not government, and landowners must be compensated prior to project implementation, yet government rarely avails the money in time.

8.4.5 Legal challenges

The World Bank (2012:114) defines PPP legal frameworks as laws, regulations and rules, and procedures used to control whether, or how, PPPs can be implemented. Hence, PPP legal frameworks enable governments to develop, enter into and manage PPP contracts. Like the World Bank, it was acknowledged in chapter six that PPP legal frameworks are not only limited to PPP dedicated/specific laws, but also include other relevant general laws and provisions. However, apart from one or two issues raised by a few interviewees, findings indicate that responses on PPP legal matters were generally PPP legal framework specific, as presented hereafter. While the PPP Policy (2010) and PPP Act (2015)

provide for PPP regulations and guidelines (refer to subsections 6.2.1 and 6.2.2), the findings show that PPP regulations and guidelines are non-existent. Similar to chapter six findings (section 6.5), the interview findings show PPP legal challenges in relation to gaps in the PPP Act, lack of critical policies, lack of PPP regulations, and lack of PPP guidelines. Particulars for each of these legal challenges are presented and discussed below.

The findings regarding the PPP Act gaps include lack of institutional independence of the PPP Unit, the Act giving too many powers to MFPED over contracting authorities, and the Act causing bias and conflict of interest. Illustrations to these challenges are as follows. Regarding the lack of independence of the PPP Unit, because the PPP Unit lacks autonomy (refer to subsection 6.2.2.1), the bureaucratic systems of government are crippling its efforts to develop PPPs. On the issue of too much powers of the MFPED, the concern is that the MFPED approves most of PPP processes and decisions, yet most of the work for project conceptualisation, feasibility, design, procurement, negotiation etc. are executed at contracting authority level. This is supported by respondents who assert that, *I think the PPP Act gives MFPED too many roles, yet it does not have enough expertise* (P10, 16:47), and *….there should be shared responsibility between the PPP Unit in MFPED and contracting authorities* (P6, 16:27). On the aspect of bias and conflict of interest, for example, the PPP Unit which offers technical guidance to contracting authorities is the same institution that provides approvals at the various stages of project preparation and implementation; and the PPP committee which is advised by the PPP Unit approves decisions of the PPP Unit (See PPP Act, 2015, Sec. 7(g &i) & 11(1b, 2h&i)).

Findings on the lack of critical policies include lack of a sound arbitration and conflict resolution window, lack of a road tolling policy, and lack of a contractor financing policy. On the issue of lack of an arbitration and conflict resolution window, PPPs are prone to many unnecessary and expensive long court litigations because the PPP Act does not provide for an administrative review mechanism through which bidding complaints can be addressed. Regarding the road tolling policy, the government has not yet put in place a tolling system, yet as a respondent explains, *the construction of KEE is expected to be completed in 2018 (next year) and thereafter go into the PPP phase of operation and maintenance through tolls* (P10, 22:47). Meanwhile with the lack of contractor financing policy, for example, UNRA has been using the contractor financing model at a very low scale because of policy constraints, and this is evident as a respondent says, *we have written to and requested MFPED to assist the road agency formulate a policy that supports contractor facilitated financing* (P7, 7:33).

The findings also indicate that there is lack of PPP regulations and guidelines, which have delayed the implementation of PPP road projects precisely because the PPP Act has not been operationalised. In fact, the enactment of PPP regulations and formulation of PPP guidelines have taken longer than expected, and a respondent ponders, *what are people doing down there*? (P9, 19:39). *The regulations*

should have come out within one year after the enactment of the PPP Act in August 2015 (P11, 19:45). Yet, *most of the PPP projects the country has tried to undertake have not been able to move forward* (e.g. KJE), *because without guidance of regulations many times they get stuck* (P4, 24:15).

Findings on the PPP regulations related examples include ambiguous prequalification requirements, lack of a reward mode for unsolicited proposals, and lack of social compliance standards for roads. On the prequalification requirements, a respondent finds the process cumbersome as he argues, *why should potential private partners be required to prepare concession documents (including concession agreement) during prequalification, yet many things are meant to change during competitive dialogue? This is painful and just a complete waste of time* (P5, 8:18). Regarding the social standards, a respondent indicates that, *Uganda has no standards/policy on social safe guards for the road sub sector. We are just using World Bank /IMF standards* (P13, 16:60). Furthermore, examples of PPP guidelines related issues include: lack of a toll fees setting formula, PPP value threshold system, PPP standard forms, time limits for project tasks, PPP bidding documents, PPP contracting documents, PPP committee guidelines, and lack of public sector comparator model. In summary, because of the above challenges, among others, there is a general lack of well-streamlined PPP processes and procedures, as well as a lack of understanding and application of PPP law across the spectrum (public, government officials and private sector players).

8.4.6 Perception Challenges

The findings presented in this subsection are partly the interviewees' PPP perceptions (in their own right) and the perceptions of other people (not interviewees) as presented by the interviewees. During the analysis it emerged that the respondents raised perceptions oriented towards the citizens/users, public agencies, and private sector as shown in table 8.2, 8.3 and 8.4 below. Each of the tables provides stakeholder category perceptions with corresponding evidence from the transcripts, and where necessary, chapter(s) (including sections/subsections) references that clarify the views from the findings are included.

Table 8.2. Citizens/User Oriented Public Private Partnership Perceptions challenges (PPP misconceptions)

Perceptions	Interview Quotes	Clarity from Thesis chapters
PPPs will increase fuel costs	Won't government increase fuel prices just to meet private sector payments in case the toll collections fall far much below the projections? (P3, 28:9)	Chapter 8 , subsection 8.3.1
Contract conditions should never change	.....people have tended to name PPP agreements as bad deals by judging them on the current environments while disregarding the conditions that were in place at the time of contract structuring. ....the conditions of today are not the conditions of tomorrow, and the risks of toady may not be the risks of tomorrow. Because this level of understanding is lacking, PPPs continue to be viewed, adjudicated and decisions made about them in a skewed manner. (P3, 2:16). [SIC]	Chapter 3, subsection 3.3.5.1 (b)- Renegotiations.
Government guaranteeing private revenue signifies a bad deal	The UMEME concession people thought it was a bad deal because they saw government coming in to provide some guarantees. (P2, 2:10).	Chapter 3, subsection 3.3.5.1 (c)
Government has an ill motive in pushing for amending of land (acquisition)	The current land amendment bill has been resisted.....because government will definitely undervalue people's land. (P7, 25:50)	Chapter 6, section 6.3.5, and chapter 8, subsection 8.4.4
Paying tolls is double taxation	Why should I pay a road toll when I am already paying taxes? (P1, 10:6)	Chapter 3, subsection 3.3.5.1 (c)
PPPs are a form of privatisation	Some people think that tolling a public road implies that government has sold off the road to the private sector. (P5, 2:10).	Chapter 2, subsection 2.3.2.5
Public goods should never be paid for by users	Our local people who have not been exposed do not understand why they should pay toll fees to use a road, given that a road is a public good. (P2, 6:2	Chapter 4, section 4.3

Source: Author

Table 8.3. Public Agencies Oriented Public private Partnership perceptions Challenges (PPP misconceptions)

Perceptions	Interview Quotes	Clarity from Thesis chapters
Reduced powers and loss of jobs	The aging technocrats in public institutions believe PPPs will take away their work or part of their responsibilities. (P2, 1:14)	-
EPC projects are PPPs	Chinese have convinced people in Uganda to believe that EPCs are PPP project. (P16, 19:59)	Chapter 3, subsection 3.3.5.2
Bilateral arrangements (between countries) are PPPs	China gives the government of Uganda a loan at a lower interest rate to construct KEE conditioned on the fact that CCCC a Chinese construction company had to be contracted; and people think this is a PPP. (P1, 1:5). [SIC].	-
PPP is a finance but not a procurement model	For me, I look at PPPs as an alternative model of financing. (P9, 28:58).	Chapter 2, subsection 2.3.2
The PPP law was made to weaken the PPDA law	The way the law was done.....they completely moved away from PPDA ACT and formed their own ACT. (P6, 1:48).	Chapter 6, subsections 6.2.1 & 6.3.1
PPPs are a panacea to all infrastructure needs	…..People get excited and they want to do all the roads through PPPs. (P10, 20:39)	-
PPPs take longer to deliver than conventional procurement projects	Many people in government have a mentality that PPPs take long time and therefore can never deliver road projects. .....forinstance, if government fails to provide right of way on time, you cannot then blame PPP saying that the thing is not moving forward. .....there is nothing a private guy is going to do without land. (P2, 8:4)	Chapter 1, section 1.3

Source: Author

Table 8.4. Private sector Oriented Public Private Partnership Perceptions

Perceptions	Interview Quotes	Clarity from Thesis chapters
Private sector inflates project prices	...why do you do these PPPs where the private sector is going to squeeze us in the high cost of service? Even the president himself said that if the government itself did these roads the cost would be low. (P2, 17:8).	Chapter 8, subsections 8.3.5 and 8.4.3
Private sector is a profit maximizer	The private person calculates a lot because he is for profit making but not for charity. (Pg10, 1:66).	Chapter 8, subsection 8.4.3.4
Private sector is interested in ripping off citizens	The private will aim to milk the system. (P8, 18:37)	Chapter 8, subsection 8.4.3.4
The local firms are inferior to foreign firms	There is mistrust and belief that a Ugandan company or worker cannot do good work as a Chinese. I think this is a stereotype, and it is not correct. (P5, 11:18).	Chapter 8, subsection 8.4.9
Private sector is in desperate need of investing in public facilities (as thought by gov't officials)	I think there is need to change the mind-set that the private sector has money and that they bring in the money when you create an opportunity (P15, 20:63).	Chapter 8, subsection 8.4.3.1

Source: Author

Whereas the PPP perceptions above are fundamentally/ideologically wrong, however, in practice they may be (or seem) true because of the current PPP environment and management practices in the country. Note that, weak PPP systems, environments, poor management practices, and project performances can force a government or private company to overturn or undermine PPP principles. For example, the government may increase fuel prices in case actual toll revenue collections fall far below the projections, and further, the private sector may take advantage of the weak PPP systems of government to inflate bid/contract prices. Based on the aforementioned findings, it is concluded that the misconceptions/myths, whether in terms of PPP fundamentals or Uganda's PPP practices, or the actual wrong implementation of PPPs in the country, mainly arise from a lack of PPP capacity building and awareness, among other factors (as captured in this chapter).

8.4.7 Political challenges

Politics is visible worldwide in public sector projects, and in fact, politics drives road projects and road projects drive politics as well. Whereas constructive politics leads to PPP success, on the other hand misguided politics distorts their performance. Pointing to misguided politics, Koppenjan (2015:32) emphasizes that political challenges are one of the most critical factors that refrain the private sector from investing in public projects. In the context of Uganda and based on the findings, political challenges are associated with both political unpredictability and political interference.

Findings indicate that political interference include politics defining PPP projects, determining which road to be constructed and where, influencing the financing of projects, political directives, political appointments for public sector top executives, and limited analytical skills/capacity of some politicians for technical work. Although politics can never be divorced from public service delivery, the excesses of the political class, however, limit institutional independence. Because politicians make unrealistic manifestos and promises when campaigning for political offices, *they at times dictate construction of a road where or when it may not be socially and economically viable* (P8, 15:28; P13, 22:59). For instance, a respondent indicates that, *the structuring of KEE was never a PPP, but the word PPP was introduced later to sell the project for political reasons* (P12, 20:46). Technocrats in Uganda succumb to political pressure because top executives who supervise other technocrats in public entities are politically appointed, and likewise, political appointees (the ministers) supervise the top executives. Consequently, a respondent poses the question, *if I give you a job and I say to you, this is my project, and you know that I can sack you if you do not deliver, what do you do?* (P6, 3:36). Borrowing from Ntayi (2013:36), these are signs of the employer's coercion and sanctions that may force employees with serious economic, employment and retirement uncertainties to comply with unethical demands even when they have sound moral identities. As such, political decisions prevail over technocratic decisions, and political programs have become the fast track into the work of technical staff without a lot of due scrutiny.

Furthermore, recently every government proposal or project in Uganda seems to be politicised by legislators. For example, regarding the Constitution Amendment Bill (2017) for land acquisition by government (See subsection 6.3.5), a respondent argues that, *a group of politicians is going around saying that government will forcefully take people's land. .....of course, the politicians are misusing the whole thing in order to gain some political capital* (P3&4, 7:15).

The direct meddling of politicians in technical work, as a respondent observes ...*has led to policy implementation reversals, because they say this today and say something different tomorrow* (P2, 14:11). An example of this is the substituted and repealed section 88L (1&2) of the PPDA Act (2003, as amended 2014) which ideally had given the PPDA Authority powers to regulate PPPs under the

Public Procurement Law (refer to subsection 6.3.1). In addition, findings indicate that a number of PPPs (especially housing projects) have been frustrated by politicians who sign MOUs with private companies secretly, well before project initiation or conducting of feasibility studies by contracting authorities. Examples of projects that have fallen victim to this behaviour include the Naguru and Nakawa housing estates where the private investors pulled out of the arrangements before construction could commence, and the Kingdom Hotel project whose progress has been too slow. To remedy the situation: politicians and public officers must enforce rules without individual economic interests, succumbing to political interference or soliciting bribes; private firms must respond to market signal but not to unethical promises from politicians and must desist from offering bribes to either politicians or technocrats so as to receive preferential treatment (Brett, 2008:343).

On the other hand, findings about political unpredictability include differences in ideologies, change of political leadership, lack of trust in the private sector by some politicians, and limited political will towards effective enforcement of policies. It was noted from the interviews that some politicians have no confidence in the private sector because they perceive it as a sector whose only motivation is profit and, hence, a cause of the costly government projects. Differences in ideologies create disagreements regarding government investment projects, while a change in political leadership may affect project sustainability (whether at national or ministerial levels). For example, a respondent indicates that, *there is always slowness in some areas of service delivery every time ministries change political leadership* (P8, 1:57), while another states that, *Uganda has never had a successful transition of power* (meant from one president to another). *So the private sector may be sceptical whether in case of change of political leadership the new governments would gladly take on the responsibilities and commitments made by the current government* (P9, 7:43). However, with the KJE project this may not be a big issue, because according to a respondent, *UNRA is proposing to avail a partial political risk guarantee to the private sector provided by a reputable institution, such as the African Development Bank* (P9, 6:30).

In conclusion, whereas Willems and Van Dooren (2016:200) argue that PPP contracts with specialised private actors avoid the electoral politics pitfalls of short-sightedness, instability, and political selfishness to improve value for money, however, based on the findings and discussions above, these political ills are still rife in Uganda. According to scholars of procurement governance in Uganda, like Ntayi (2013:42), and Basheka, Tumutegyereize and Sabiit (2012:1811), the high political risks are attributed to a syndication of politicians and politically affiliated groups of public sector employees who decide to cooperate in order to act unethically.

8.4.8 Project planning and management challenges

Project planning and management aspects relate to the extent to which PPP project processes are managed. Although there are various PPP project processes (refer to subsection 6.2.3 and 9.4.7), in this

study the findings lean towards the formation stages of projects because PPP road projects in Uganda are in the initial stages of project development. Based on the findings, project planning and management challenges are associated with project data, planning, procurement, and project lifecycle cross cutting issues, as presented in table 8.5 below.

Table 8.5. Project Planning and Management Challenges

Project Data		**Project Procurement**	
1	Insufficient data to support PPP decisions	1	Limited competitive bidding
2	Unreliable data for PPP planning	2	Negotiations take long time
3	Lack of reliable traffic volume studies	3	Entire procurement processes take long time
Project Planning		**Project lifecycle Cross cutting**	
1	Biased feasibility studies	1	Bureaucratic PPP approvals
2	Limited vehicle inlets and outlets on toll roads	2	Entire PPP project processes take long time
3	Lack of local capacity to conduct feasibility studies	3	Lack of due scrutiny of PPP processes by technical staff
4	Lack of enough funding to conduct good feasibility studies	4	Project delays because of lack of internal capacity
5	Difficult to ascertain project scope	5	Poor management of project timelines
6	Difficult to structure PPP finance models	6	PPP projects are expensive to deliver
7	Poor long-term planning	7	Complex PPP processes

Source: Author

Provided below is a brief description of each category of findings reflected in table 8.5 above.

Regarding the Project data findings, data to support PPP decisions is very limited, and even the little data available may not meet the reliability test because of the volatility of the economy. Secondly, with Project procurement finding, competitive bidding has been threatened partly because certain groups of investors hate being subjected to competition - a case in point are the *Chinese companies that have the money and the willingness to invest in Uganda's PPP roads but never want to be engaged in competitive tendering processes* (P4, 22:19). In addition, respondents seemed disappointed that PPP negotiations habitually take a longer time than public procurement, however, excessive negotiation time lags can be avoided by having streamlined negotiation processes and experienced negotiators.

With respect to the Project planning findings, a case study of the KEE project is used to approach this factor. On the issue of project scope, the road design and alignment slightly changed during construction

because of geographical uncertainties (e.g. a rock) and some landowners demanded exorbitant prices, which prompted the channelling of some stretches of the road to more favourable pieces of land. In terms of poor long term planning, the road has few inlets and outlets that make it less flexible in usage. For example, *the road passes in Kakungulu estate but people there cannot access it. ….and the moment you are on one side of the road, you cannot come out to another side* (*P9, 1:62;* P9, 1:63) [sic]. Similarly, the road lacks connecting and access roads that are free of traffic to and from Kampala city. For example, *accessing KEE from Kampala city center or connecting to Kampala city center from KEE in Busega you have to move on the existing Kampala-Masaka road that is highly congested* (P6, 23:24). However, when coming from Jinja or from the direction of the Northern bypass road, it is easier to connect to KEE at Busega because of the newly constructed road stretch that links the two roads.

Regarding the project life cycle cross cutting findings, the progress of PPP road projects is being frustrated because the PPP law partly introduces bureaucratic management systems and complex PPP processes. For instance, *the initial studies for KJE were done in 2009 but up to this day we neither have a contractor nor do we have the right of way*. (P1, 3:4; P2, 3:39). Finally, PPP projects seem expensive in the short run when compared to conventional projects, partly because *they are costly to structure, conduct feasibility studies, and engage transaction advisers* (P13, 26:47), among others. In fact, the lack of PPP local capacity worsens the situation because imported consulting or labour is extremely expensive.

8.4.9 National labour/private sector challenges

Whereas interview questions largely targeted the PPP capacity of the private sector (whether international or local), the responses on capacity challenges, however, turned out to be associated with only the local private sector. In a study about PPP implementation in the construction industry, Alinaitwe and Ayesiga (2013:9) establish that having a well-organised private sector that has competent personnel and with capacity to expand and compete favourably with international firms, is among the first five critical success factors for PPPs in Uganda. However, findings for this study indicate that the Ugandan local private sector generally has not yet amassed the necessary capacity to take up PPP tasks in the country. The findings link local private sector challenges to work behaviour, capacity, government failures, and company formation processes. Below each of aforementioned challenge categories are presented and discussed in detail.

The findings on work behaviour include poor attitude towards work, undisciplined labour force (e.g. theft and corruption), laziness of the labour force, limited commitment of contractors, and shoddy work by contractors. The unethical behaviour attributed to the local labour is expounded as follows. *It is common to find unqualified, unskilled and inexperienced local companies responding to a call for bids* (P2, 23:7). This escalates procurement corruption as firms fight to win tenders at all odds, and

consequently delivering substandard work. Furthermore, the laziness of the local labour was described thus: *the local labour force is very excited with money, and once they are paid, they easily get distracted from delivering on the project* (P9, 7:42). The incidence of theft and corrupt behaviour by some local labour, was illustrated by two respondents as, *Ugandan* (local) *drivers are suspected of siphoning fuel from construction company trucks during construction works* (P8, 5:31), and *it is common to find someone on government side illegally working as an adviser to private operators* (P8, 18:35) that do business with government.

Due to the aforementioned challenges, even the well-established foreign companies already working on government projects in Uganda, and which would have subcontracted the local private companies, are hesitant to do so because they have less trust in the local labour. While the respondents collectively agreed that the behaviour of the local labour has been improving over time, however, one respondent partly tends to justify the unethical behaviour of the local labour by stating that, *the pay offered to the Ugandan* (local) *labour is never commensurate to the efforts, and this subsequently affects their work morale* (P12, 22:53).

The findings on the capacity of the local private sector include lack of capacity building (by the local private firms themselves), lack of technical skills, lack of equipment, lack of financial capacity, lack of organised labour groups, limited PPP experts, and a weak road construction market. Given that most of the local private sector capacity challenges are broadly discussed in subsection 8.4.2 above, the study therefore highlight only a few issues here. While a respondent seemed to argue that the country lacks specialised competencies when he stated that, *we do not have bridge specialists and hydrologists in the country* (P8, 6:28), there is, however, a general lack of PPP capacity for the road industry, as reflected in the view of a respondent who says, *the consultants that are helping us on PPPs are all foreign companies or individuals* (P5, 30:21). Among the main reasons for the slow progress in the development of road projects in Uganda, is the lack of a local private sector that has formal PPP business capacities and competencies. Therefore, to achieve efficient PPP delivery in the country, the local private sector needs to invest in building capacity of its personnel, and developing a well-organised, collaborated and regulated PPP private sector business intelligence (Alinaitwe & Ayesiga, 2013:9) alongside government efforts.

The findings on government failure include government not having decisively supported local content, weak policies and systems to enforce local content, and laxity in effecting expatriate labour restrictions. Uganda has a number of local content policies promoting the use of local labour, goods and services. These include the National Development Plan II (NDP II), the Buy Uganda Build Uganda Policy-BUBU (2014), the reservation and preference schemes provided for in the PPDA Act, (2003 (as amended 2014)), and the PPDA reservation schemes guidelines of 2018. However, their impact on the

use of local private sector labour remains a big challenge because of low enforcement by the authorities. Also, it seems the public sector has not taken an interest in fully utilizing the few available PPP competencies in the country, as a respondent claims that, *I realize that the majority of the people at the center of PPPs lack competencies, while the competent ones are not participating in PPP processes* (P4, 11:14).

Related to the above, whereas findings show that Uganda has local capacity problems, on the other hand, as a respondent argues, *we have not been stringent enough on the use of local personnel by contractors, because even where we have capacity, we have left it at large to the private sector to carry out a market assessment and determine which labour they can get in Uganda or from overseas* (P10, 6:35). Supporting this view is a respondent who argues that, *you find a Chinese company having Chinese driving the company trucks, holding flags to direct cars on the roads, and opening gates. Do we need such people from China or India? Even the so-called work permit fees, they are not deterrent enough to keep these petty workers away because they involve small moneys for anyone to afford* (P12, 25:42).

Lastly, findings indicated that the processes for forming a company specifically for a PPP project, is very problematic. According to section 20 (1) of the PPP Act (2105) a private party involved in PPPs must be a SPV company incorporated under the laws of Uganda. Globally, this is a complicated and tedious process to meet and comply with (*see* subsection 3.3.3), though in the case of Uganda it is even worse because of lack of a well organised, coordinated, and mature local private sector.

In summary, section 8.4 has presented and discussed findings on PPP challenges for road infrastructure development under the themes of macro-economic, financial, government, land, legal, political, project planning and management, and private sector (local labour). Below is a snapshot of the findings for aforementioned themes, and what appears in brackets for each of the nine themes represents findings at the middle level of data analysis. These are macro-economic (poor credit rating and high poverty), financial (commercial banks, pension and insurance sectors, and capital markets), government challenges (unprofessional conduct, PPP Unit and PPP committee human resource gaps, limited PPP capacity in road agencies), PPP misconceptions (by citizens/road users, private sector, and road agencies), Political (political interference and unpredictability), Project planning and management (project data, project planning and project lifecycle cross cutting issues), and Private sector-national labour (unethical behaviour, lack of technical and financial capacity, government insignificant support for local content, and complex processes in forming an SPV company). In the next section, a presentation and discussion of the findings about Uganda's readiness to undertake and execute PPP road projects is undertaken.

8.5 PUBLIC PRIVATE PARTNERSHIP READINESS FOR ROAD INFRASTRUCTURE DEVELOPEMENT

Notwithstanding the PPP challenges discussed in section 8.4 above, the findings show a few signs of PPP readiness for road infrastructure development, as will be presented shortly. Actually, the general PPP environment of Uganda is at stage one of the PPP development maturity curve (refer to tables 3.6 and 3.7, and figure 3.9). Based on the interview responses, the study organises PPP readiness factors for Uganda under government efforts, private sector potential, and road sub sector efforts.

8.5.1 Government Efforts

The findings associate government efforts with political environment, financial support, PPP structures and processes, legal system and support to PPP committee, as presented and discussed below.

8.5.1.1 Political environment

The findings indicated that PPPs are beneficiaries of political support, and political stability and security in the country. The impact of political support for PPP road projects to succeed should not be underrated given that political manifestos must feed into national programs. Investments in Uganda seem to enjoy political support, as manifested in two statements often made by President Museveni, as a respondent states: *public infrastructure must be prioritized, constructed on time and at the cheapest cost* (P8, 21:30), and, *if anyone is caught frustrating an investor I will deal with him* (P10, 15:32). In fact, at one time the president directed the Minister of Investment to withdraw a $80,000 premium on plots of lands in the industrial area of Namanve as a way of incentivising investors (Patriot Magazine, 2017:29). This magazine quoted the minister having said, “president Museveni said to me: Anite, you either scrap the $80,000 premium or I scrap you”. Specific to road infrastructure, PPP road projects seem to receive collective interest and support from all political groups (both ruling and opposition parties). A respondent attributes the unanimous political support for PPP road projects to the fact that…*roads serve all people no matter their political affiliation* (P8, 8:25). However, *political disharmony comes in when public projects are being or have been mishandled* (P8, 21:30). [sic]. Also, as already discussed in 8.5.7, politicking can become a stumbling block to government investment efforts.

Furthermore, the findings indicated that Uganda enjoys political stability and security, and this is very important in attracting PPP investors, as argued by a respondent stating that, *the private sector is very sensitive to a country's political environment when it comes to investment* (P8, 17:35). According to Brett (2008:351), the Museveni government programmes of political reconciliation and democratisation, and economic reconstruction, since 1986, not only improve political support for the regime and political stability but also encourage investment in Uganda.

8.5.1.2 Financial support

Findings suggest that the government extends some funds to UNRA for capacity building, there is availability of a budget for land acquisition, and government makes a financial contribution towards the construction of PPP roads. A respondent indicates that, *Ministry of Finance already has a budget for paying for the right of way for KJE* (P3, 8:9), while another states that, *government has promised to contribute some funds towards the construction of KJE in order to make the project bankable and also avoid future social uprising* (P14, 22:65). While having approved budgets for land acquisition and promises to fund part of the construction of KJE is a good sign, however, the realization of such monies for implementation has always been a serious constraint to the Ugandan government. In fact, the land fund that should be availing money for land acquisition (as per section 41 of Land Act of 1998) is neither operational nor capitalised, and the domestic revenue which government would use to fund PPP roads is very limited, unless government uses loans from direct borrowing. These are important financial issues that government needs to urgently address in order to realize tangible progress in the implementation of PPP road projects.

8.5.1.3 Public Private Partnership structures and processes

Findings show that there is emerging capacity in public agencies, existence of a number of PPP structures, improving PPP processes, availability of some data for making PPP decisions, and government is committed to approving PPP road projects. These are explained hereafter. Out of the six PPP road projects proposed by UNRA (see section 5.5), *the government has so far approved two projects (KEE and KJE) for implementation* (P2, 22:5), and while data for PPP planning is limited, however *UNRA accesses and utilises data from Bank of Uganda (on financial sector performance), IMF (on global economic indices), MFPED (on national GDP), NSSF (on Pension fund performance) and Uganda Bureau of Statistics (on inflation) to develop PPP financial models* (P7, 7:35; P6, 6:19). Additionally, PPP processes are fairly streamlined because, as a respondent explains, *when a contracting authority registers a project with the treasury or PPP unit, it can track the progress of the project,…and the PPP committee always sits to give approvals for whatever stage of PPP project preparation*. (P6, 27:20) [sic].

The majority of the PPP structures, as proposed by PPP law (refer to subsection 6.2.2), are in place save for a few (such as project officers and project teams) at the contracting authorities level. While a few contracting authorities, for example, *KCCA set up a PPP office with a mix of skills, and headed by a PPP officer*, (P7, 29:24), however, the functionality of PPP structures, whether at contracting authorities or regulatory and supervisory bodies, generally remains a huge challenge in the country. Notwithstanding the aforementioned challenges, it is noted that since the enactment of the PPP Act in 2015 the PPP environment has slightly improved. For example, a respondent explains that, *at least now*

there is some sanity because we have a sense of direction on how to treat PPPs, some initial capacity has begun to be built, and a number of us now have relative understanding of PPPs (P3, 27:5). [sic].

8.5.1.4 Legal system

The findings suggest that the available laws that support the implementation of PPP projects include a draft roads tolling policy, a good PPP policy document, a vibrant judicial commercial system, a fair compensation system, sound environmental laws, the PPP Act, and a sound and already tested PPDA law. Specific to the fair compensation system, for example, the Guidelines for compensation assessment under Land Acquisition (2017:10) for the Republic of Uganda, provide that land and property owners must be compensated and the compensation should not put them in a worse situation than they were in before the displacement. In summary, because the aforementioned laws and those never mentioned by the respondents, but relevant to PPP operations in Uganda, were discussed in detail in the whole of chapter six, reference can be made therefrom.

8.5.1.5 Public Private Partnership Committee

Based on the findings, the PPP committee is fully constituted with 10 appointed members, as stipulated in section 5 of the PPP Act (2015), plus an Acting Director of the PP Unit who works as a secretary to the committee. Furthermore, the PPP committee has started holding meetings to consider projects submitted for approval, and the members of the committee are paid retainer fees as remuneration for services rendered. Whereas subsection 8.4.3.2 above indicates that the PPP committee lacks adequate PPP skills and experience, however, a respondent argues that, *the PPP committee membership composition is the best any one could have gotten in the country* (P9, 26:31). However, a respondent from the public sector (P4, 3:40) questions whether consideration of the academia and gender parity (refer to subsection 6.2.2.2) are relevant for PPP committee competencies. Such prejudiced view calls for awareness creation among public officers about the strength of the opinions from and having such contested teams on the PPP committee for appropriate PPP decision making.

8.5.2 Private sector potential

Findings suggest high interest levels from the local and foreign private sector, and availability of artisan skills among the locals for PPP road projects. The willingness of the private sector to participate in PPP road projects is promising, for example, as a respondent states, *KJE has attracted so many private sector players who would have loved the project opened to the market like yesterday* (P13, 22:62). Actually, from the market sounding exercise for KJE conducted by UNRA, a respondent says, *over 200 potential bidders showed up and close to 20 called in via teleconferencing, and these included both foreign world class profiled and local contractors* (P10 & 11, 7:46). Furthermore, because project feasibility studies

conducted by UNRA comply with the equator principles (these are standards adopted by financial institutions for ensuring that environmental and social risks are assessed and well managed in project finance), as such, *UNRA attracts financing from donors and gains community confidence for PPP road projects* (P8, 7:38).

8.5.3 Road Sub Sector Efforts

The readiness of the road sub sector in implementing PPP projects was manifested in PPP process enablers and compliance with environmentally friendly requirements, as described below.

8.5.3.1 Public Private Partnership process enablers

UNRA contracts reputable transaction advisers, conducts global market sounding campaigns and public awareness meetings about proposed PPP projects, conducts willingness to pay and thorough feasibility studies, and receives advice on PPP procurement matters from both the PPP Unit and the PPDA Authority. To illustrate these findings, first, *the government engages International Finance Corporation (IFC)* the private arm of the World Bank *as the transactional adviser for KEE and KJE to fill the PPP skills and expertise gaps* (P1, 14:4), and *the PPDA Authority has been instrumental in guiding on document preparation for procuring transaction advisers* (P1, 24:2). In addition, UNRA sensitizes communities and key stakeholders (e.g. parliamentarians) about the proposed PPP projects, especially KJE and KOB, and, according to a respondent, *UNRA has demonstrated to the people the impact of the projects and convinced the affected people to accept the current inconveniences for realisation of greater benefits in the future* (P7, 7:36). All the above initiatives are geared towards quality services and infrastructure, as well as public acceptability of PPP road projects.

8.5.3.2 Environmentally friendly compliance

UNRA has improved environmental compliance, has an internal team of sociologists and environmentalists, and blasts rocks on quarrying and road construction sites upon securing a police license. Explanation of these highlighted findings follows hereafter. UNRA ensures that contractors prepare environmental and social plans, monitors their compliance with employees' welfare, and ensures environmental and social protection. For example, as a respondent states, *UNRA sensitizes communities about HIV and other sexually transmitted diseases along road construction sites, and has recently instituted about a UGX. 5m penalty on every invoice placed by a contractor that fails to comply with social and environmental standards* (P8, 7:37). Such awareness initiatives and penalties improve compliance levels of the different stakeholders.

Finally, whereas traditional roads would be constructed by filling stones and soil into a swampy area, however, with PPP road projects environmentally friendly means are being used. For example, at Nambigirwa on the KEE a 1.5 km suspension bridge was used over a swamp, as a respondent narrates, *they dug and planted pillars in the swamp to hold the bridge and the swamp was reinstated after erecting the bridge* (P9 & 10, 1:64). Provided below are 2 pictorials for environmentally friendly (see figure 8.2) and non-environmentally friendly (figures 8.3) roads constructed in swampy areas in Uganda.

Figure 8.2. Suspension bridge at Nambigirwa

Figure 8.3. Road on a swamp at Katonga

Source: Author

Figure 8.2 represents the environmentally friendly practice of a bridge constructed above the swamp on the KEE PPP road, while figure 8.3 represents the non-environmentally practice of a road constructed directly on a swamp on the Masaka-Mbarara ordinary road.

In summary, section 8.5 has presented and discussed findings about PPP readiness exhibited for the development of road infrastructure in Uganda under the themes of government efforts, private sector potential and road sub sector support. The government efforts findings included the political environment, financial support, PPP structures and processes, legal system, and PPP committee capacities. The private sector potential findings comprised of high interest in PPP projects by both foreign and local companies, and availability of artisan skills in the local market. The findings on road sub sector support included PPP process enablers, and improving environmentally friendly compliance. In the next section, the study presents and discusses findings relating to PPP opportunities for road infrastructure development.

8.6 PROSPECTS FOR AND OF DEVELOPING PPP ROAD PROJECTS

According to Osei-Kyei and Chan (2017:113) PPPs is an innovative procurement approach with good future prospects for the construction industry globally. Notwithstanding the PPP challenges described in section 8.4 and building from the PPP readiness factors in section 8.5, this section presents and discusses opportunities attached to the development of road infrastructure in Uganda through PPP mechanisms. From the findings, the PPP prospects have been organised in groups of citizen support/benefit, public road agencies, global partners, PPP Unit performance and support from other public entities and the private sector, viability of toll revenues and legal factors. Provided below is a detailed account of findings for each of the groups highlighted above.

8.6.1 Citizen support/Benefit

Findings regarding citizen support for PPP road projects include a reasonable number of people willing to pay tolls, the government's commitment towards ensuring property and landowners get compensated, and providing alternative free access routes to toll roads. Equally, the respondents (findings) argue that citizens envisage PPP projects to decongest GMKA roads, to create employment, and to foster improved quality roads countrywide because PPP projects will act as a benchmark for ordinary road projects. Regarding the willingness to pay factor, for example, UNRA conducted a willingness to pay survey for the KJE in 2015 and results indicated that, *43% of the public was willing to pay road tolls at an average fee of UGX.70 per kilometer* (P14, 7:59), and similarly, by 2017, before the opening of KEE for public use, *some people were already illegally using the road and making illegal payments to the people guarding the construction site* (P12, 6:39). Given these two examples, as long as PPPs provide better road services, the willingness to pay among road users may be high because Ugandans generally quickly get excited over new things, and like good facilities and looking unique. Meanwhile, on the issue of alternative free access routes, the government so far promises the existing (old) roads running parallel to the proposed PPP roads to remain free of access. Cited by a respondent, such alternative roads include *Kampala-Entebbe road, Kampala-Jinja road, and Kampala-Mpigi road* (P8, 27:25).

Notwithstanding the aforementioned opportunities, public resistance may ensue because tolls restrict road usage, the public lacks PPP exposure for roads, and politicians may incite the public against tolls (as this has become a common practice with most government investments). As such, stakeholder analysis and creating awareness for the public to appreciate the relevance of direct user tolls, is paramount. Actually, in the 1980s and earlier 1990s, Uganda had a few tolled roads (e.g. Masaka road had a tollgate at Lukaya) but government later disbanded them because, *people were not eager to pay tolls since they were already paying taxes, and it remained the same old roads, the same potholes and the same business capacity* (P1, 10:6; P3, 20:14).

8.6.2 Opportunities for Public Road Agencies

Findings associate opportunities for the Public Road Agencies to the bundling of project tasks and benefits from private sector participation, and the local pension and insurance market's potential, as presented and discussed below.

8.6.2.1 Bundling of Project Tasks and Private Sector Participation Benefits

Findings suggest that the combining of projects tasks into a single or very few contracts will reduce project risks and contract management challenges, improve road maintenance, reduce tendering costs and procurement timelines, and create synergy in skills and expertise for PPP projects. Notwithstanding the challenges of forming and operating a SPV (already highlighted in subsection 8.4.9) as a requirement for bundling of tasks, on the other hand such arrangements can facilitate effective delivery of PPP projects. Firstly, bundling of project tasks transfers most of the project responsibilities to the consortium of companies, giving government an opportunity to concentrate on project monitoring and contract management, and secondly, it motivates contractors to develop better road designs to avoid construction problems, and to construct quality roads to avoid high road maintenance costs in future. This is in agreement with Hoppe, Kusterer and Schmitz (2013:145&146) who argue that a contractor responsible for both construction and operation of a project, becomes inclined to invest more during the construction phase so as to minimise costs in the subsequent stages of the project.

In addition, findings suggest that greater private sector involvement in PPP road projects will ensure: timeous road financing, sustainable road maintenance, construction of roads earlier rather than later, minimisation of construction and maintenance cost overruns, efficient and quick delivery of infrastructure, payments to contractors spread over a long period, and government negotiation capacities and technological advancements improvement.

8.6.2.2 Local Pension and Insurance Markets Potential

Findings indicate that NSSF (the only private pension firm) has financial capacity (from majority of respondents), and most of the local insurance companies have reinsurance policies (from a few respondents). Notwithstanding the fact that the local insurance market lacks financial capacity, some interviewees seem to argue that reinsurance can reinforce the financial capacity of insurance companies to invest in PPP road projects. For instance, a respondent states that, *when a local insurance company gets a big business, it contacts international insurance companies like AIG in Japan or USA to issue a second cover* (P22, 16:96). However, reinsurance may become expensive to government since the costs for inter-insurance company collaborations may indirectly be borne by the insured.

From the pension market perspective, apart from three respondents (as highlighted in 8.4.2.3), the remaining 27 respondents stated that NSSF has the financial capacity for PPP road project investment. Evidently, *NSSF collects a lot of money every month, but lacks good areas for investment* (P13, 7:58). Actually, NSSF's total financial contributions from subscribers stood at UGX.917bn in 2017 increasing from 785.5bn in 2016 (a 17% increment), and monthly average contributions grew by 18.5% (from UGX.65bn to UGX.77) in the same period (NSSF, 2017). Sustainability of the financial performance of NSSF between 2016 and 2017, as shown above, may be attributed to the improved and high compliance rate of 3% (from 77%-80%) and growth in the number of employers and registered members by 14% and 9% respectively. Meanwhile, NSSF seems interested in PPP road projects, as reflected in the statement that…*recently NSSF indicated to UNRA that it would invest, for example, in KJE once the financing structure of the project is clear* (P13, 7:58). [sic]. However, such a view implies that NSSF can only invest in PPP road projects when government is able to guarantee the subscribers' money and returns throughout the contract time of the project.

In conclusion, whereas opportunities, raised in subsections 8.6.2.1 above and this subsection, would facilitate effective development of PPP road projects, there are, however, potential obstacles from contracting authorities. These include unclear viable avenues for investment recoupment by the private sector, lack of internal PPP capacity that may cause government to absorb most of the project risks, unrealistic procurement timelines, unclear institutional oversight functions in the road sub sector, selective PPP sensitization, and underestimation of procurement roles. Provided below are illustrations from respondents to explain some of the aforementioned obstacles:

1. *The constructing of KEE is about to be completed, and we expect the road to be opened in 2018, but I do not see them preparing us. We need to know if the road will be paid for by direct users, and how much will the toll charges be?* (P6, 26:19; P5, 23:20).
2. *I would love to see a relationship between PPPs and procurement…because largely what PPPs go through is procurement* (P5, 21:18).
3. *Most PPP projects are never completed within the time lines and the blame usually goes to procurement yet the problem is failure to involve procurement from the start* (P13, 16:57).
4. *…it is not yet clear which government entity will oversee toll fees management; could it be URF, UNRA or MoWT?, and which one will oversee the implementation of operation and maintenance contracts; could it be UNRA or MoWT?* (P10, 28:31) or URF.

8.6.3 Opportunities from and to the Global Partners

Whereas respondents unanimously were unhappy with government employing foreign labour on national PPP projects, on the other hand 29 out of 30 respondents indicated that, currently Uganda has no option since it lacks local technical and financial capacities, in addition to the poor attitude of the

local labour towards work. The findings on the opportunities from and to the global partners were associated with foreign private sector capacity, benefits to foreign companies, and intergovernmental organisations' support. Provided below is a detailed presentation and discussion of each.

8.6.3.1 Foreign Private Sector Capacity

Findings indicated that foreign companies would dominate PPP road projects because of their superior capacity in PPP financing, experience, technology, and ability to access low interest loans compared to the local private firms. Consequently, local companies cannot compete favourably with foreign companies because they generally lack PPP competencies. This is manifested in the following verbatim statements: *transaction advisers for KJE are from IFC Kenya* (P2, 18:6), *the cost of money in China and America is very low compared to the cost of money in Uganda* (P10, 21:37),….*no Ugandan company can execute a one billion (USA) dollar project* (P5, 13:17), *local contractors lack trained and skilled personnel* (P9, 7:41), and…*when we run adverts for road construction projects it's usually foreign firms that respond with bid submissions*. (P5, 30:20). [sic]. Therefore, the participation of foreign companies would fill the PPP gaps within the local private sector environment.

8.6.3.2 Benefits to Foreign Companies

Because Uganda is a liberalised economy, according to the findings it operates an open revenue repatriation policy that allows foreign investors to repatriate their money freely without any encumbrance as long as they pay taxes. In fact, *there is no law that stops people from repatriating their funds* (P10, 18:47; P9, 24:31) in Uganda. While an open revenue repatriation policy immensely motivates foreign investors because they can reinvest revenue generated in Uganda in more stable economies, however, to the citizens of Uganda this stagnates growth and the quality of life because locally generated revenue would be used to boost employment and income levels of other countries (Singh, 2015). Furthermore, findings indicate that foreign investors could benefit from the fact that national labour is cheaper than foreign labour, which would minimize their operational costs. This is supported by respondents who argue that, *local labour already has good artisan skills and is trainable and willing to learn* (P14, 20:61), therefore,…*you are better off training a Ugandan to thereafter work for you than fly in a German, maintain him around, and pay him per day* (P13, 2:49). [sic]. Contextually, the training of the local labour should not only target improving the locally available, but also locally missing, technical skills.

Furthermore, findings suggest that the government is now committed to and prioritises quick issuing of investment licenses and work permits, especially for foreign investors. For instance in FY 2015/2016 out of the total licensed projects, 69.7% were for foreign investors (National Budget, 2017/2018:70). In an effort to realize such aspirations, the Uganda Investment Authority in 2017 launched an online

electronic business portal called "Digital One Stop Centre" that integrates a number of government services, inclusive of work permits and licenses, which enables investors to access and receive services faster and at a time and place of their convenience (National Budget, 2017/2018:113).

8.6.3.3 Intergovernmental Organisations' Support

Findings show that Uganda receives assistance from multilateral organisations, specifically for PPP development, in the form of capacity building, advice and financing. The PPP support coming from multilateral organisations mainly targets the PPP Unit and UNRA. With the PPP Unit, the development partners are primarily interested in building capacity of personnel and regulatory frameworks, as a respondent narrates that, *the PPP Unit enjoys advisory and training services from PPIAF, WB, EU, DFID; and the African Legal Support Facility (a branch of AFDB) reviewed and improved the feasibility study for KJE project, and is also developing a PPP toolkit for the government* (P9, 22:41&44). [sic]. For UNRA, the interest of multilateral organisations is to build human resource capacities, as well as provide partial financing towards the construction of PPP roads. Evidence from respondents indicates that, *AFDB is providing financial support for 8 years to UNRA to procure consultancy services and build its own PPP capacity* (P5, 6:18; P7, 7:31), and *the EU has earmarked money to support the construction of KJE project* (P9, 22:44).

Actually, even with the declining aid contributions, the development partners still fund more than 35% of Uganda's annual roads development budget (see section 5.2). Given that governments can raise financing without necessarily having to increase taxes, aid remains key to the development of economically poor countries. However, Wescott (2009:144) argues that, even with strict accountability requirements from the donors, without effective management by governments, aid/donations are capable of eroding public governance. Wescott cited a number of problems that may be associated with aid. Among others, these are: diversion of government scarce skills, corruption and conflicts over the control of aid funds, undermined accountability to the citizen, high transaction costs, fragmentation and weak coordination of donor projects, moral hazards, soft budget constraints, failure to integrate aid funds in the national budgeting processes, and uncontrolled future claims on recurrent budgets in order to maintain donor investments.

In concluding subsection 8.6.3, and notwithstanding the PPP prospects raised therein, the findings also indicate that PPP road projects have been poorly governed and tolls highly resisted in other countries, especially in developing countries (refer to section 4.4), and there is predominantly poor traffic growth forecasts and too many contract renegotiations globally. From the discussion of section 8.5, the future of PPP road projects in Uganda may not be any better, and a respondent endorses this assertion as he says, *until we are up to speed with design and management of project processes, we will fall into the*

same trap (P3, 3:13). Consequently, such unpleasant PPP happenings in other parts of the world and in the country may deter foreign investment in PPP road projects in Uganda.

8.6.4 Public Private Partnership Unit Performance and Support from other Public Entities

According to the section 11 of the PPP Act (2015) the PPP Unit has several roles (refer to subsection 6.2.2.1), but findings suggest that the PPP Unit generally performs very few of its mandated functions. The few functions that the PPP Unit has executed include assisting contracting authorities to secure transaction advisers, providing PPP advisory and organising training services, and facilitating a few study tours for key public sector personnel to countries already implementing PPPs for lesson drawing purposes. For instance, a respondent explains that, *the PPP Unit has organised and conducted many trainings for UNRA staff; and recently organized an excursion for the PPP committee and staff of UNRA handling PPP projects to study how PPP roads are working in South Africa* (P11, 26:40).

Regarding the underperformance of the PPP Unit (refer to subsection 8.4.3.2), findings suggest that this has to do with poor facilitation by the government and structural problems (as will be expounded below). On the other hand, findings indicate that the PPP Unit receives technical support from the Privatization Unit and has managed to secure office space from government. The Privatisation Unit becomes relevant to the PPP Unit due to its experience, because, before the formation of the PPP Unit, it was the public entity responsible for PPP (concession) projects in the country. Secondly, for about 2 years (from the time of its inception) the PPP Unit lacked office space as it had been temporarily accommodated at MFPED headquarters. The lack of a permanent and clear address and enough office space, respectively affected their visibility and staff establishment expansion.

Notwithstanding the above opportunities of, and support to the PPP Unit, and given that challenges of the PPP Unit have been extensively discussed in subsection 8.4.3.2, this study just highlight a few to illustrate obstacles to PPP Unit performance. The obstacles include that the PPP Unit does not make timely approvals, lacks autonomy, lacks logistical support, lacks sufficient funding, and is understaffed and the few staff available are even employed on secondment basis. Evidence and explanation of these obstacles are depicted in the views of two respondents:

1. *The PPP Unit is not detached and is easily compromisable, not fully funded, and is overloaded with work because of understaffing. Recently the PPP Unit secured Offices but even the office tools were borrowed or just given by other departments of government. There are things the Unit would have loved to do but they cannot do them because they lack resources* (P7, 20:28).

2. *When you send a project to the PPP Unit, they wait for more projects from other contracting authorities to then sit and consider all the submission at once, yet the urgency attached to each of the projects might not be the same* (P7, 29:23).

Finally, while secondment of staff is a good practice and is meant to buff up the already existing team, however, in the case of Uganda the MFPED seconded staff when the PPP Unit did not even have a single staff member of its own. Actually, by the end of the interview sessions for this study in November 2017, the staffing status of the PPP Unit had not changed.

8.6.5 Opportunities for the Private Sector

Since the private sector in this subsection relates to both local and foreign companies, and for purposes of avoiding duplication it needs to be noted that the prospects discussed in 8.6.3.2 also apply here although the factors therein suit foreign companies, apart from Uganda's liberal economy and the electronic business portal (Digital One Stop Centre) which benefit both local and foreign private sectors. In addition, the findings suggest that the private sector stands to benefit from PPP road projects because the government is responsible for land compensation and securing the right of way, has been honouring guarantees and subsidy payments in other sectors (e.g. energy), has always prioritised subsidy payments in national budgets, and is fast-tracking the provision of tax and land incentives to investors. Illustrative evidence from respondents indicates that the government *subsidizes the cost of hydropower* (P17, 26:59), *for many years has been footing the bill for shortfalls in the targeted revenue for electricity distribution by UMEME* (P5, 19:24), and *recently* (2017) *waived corporation income tax on Bujagali Limited* (a company responsible for the Bujagali hydropower plant) (P17, 26:59) [sic]. Equally, *the government has promised to set aside some money every year from the national budget for securing the right of way for KJE project* (P10, 22:45) [sic]. Such examples provide precedents about government's commitment to its contractual obligations and continued support to investor financial welfare and risk minimization.

Furthermore, findings show that the structuring of the current PPP road projects caters for local content and there is a prospect for syndication among local commercial banks, as well as between local and international banks. Regarding the local content aspect, for example, *KJE is structured in such a way that 30% of the project must be subcontracted to or executed by local companies, and project contracts will ensure progressive growth of local labour in ranks overtime* (P10, 8:33; P9, 7:40). With respect to syndication of banks, two local Banks (Stanbic and Standard Chartered based in Uganda) already fund PPP projects alongside foreign financing institutions or banks in the energy sector and air transport sub sector in Uganda. For example, Kabale Airport is being funded by Standard Chartered-Uganda alongside UK Export Finance, while Bujagali and Karuma (energy) projects are funded by Stanbic and

Standard Chartered banks alongside IFC, among others (Meyer, Eberhard & Gratwick, 2018:81; P9&10, 14:41). Such examples demonstrate renewed incentives by the government for the local labour generally, but also prospects for syndication of local banks to improve their financial capacity for PPP road project investment.

In conclusion though, the prospects mentioned above may be riddled by bottlenecks of environmental problems, low pay of the local compared to foreign labour, too many and unviable unsolicited proposals, and suspicion that many private companies would be unwilling to enter into reasonably long term contracts because of Uganda's volatile economy. For instance, with the unsolicited proposals problem, a respondent argues that *we have had many and unnecessary unsolicited PPP proposals that tend to enlist political support. ...our only relief is the PPP law...otherwise in the absence of the law they were a nuisance* (P2&3, 27:4). Regarding the environmental problems, although the laws of Uganda clearly state that roads must be watered and protective gear used during construction to minimise dust pollution to communities, and to ensure safety and health of workers, the implementation of such laws, however, is limited. Evidence from a respondent indicates that, *roads are watered when a road inspector is coming or a big person is on site; and construction companies rarely provide protective gear to employees, but even the employees that happen to have protective gear, they never use them claiming that they cannot breathe properly* (P13, 20:52) [sic]. Still on the environmental aspect, Uganda is one country where people dump and litter garbage and waste anywhere and everywhere, including passengers, consequently blocking road drainage systems and making roads filthy. Such concerns and problems emanate from poor law enforcement and poor sensitization, and should not be underrated because they have a big bearing on service quality, as well as the bankability of PPP road projects.

8.6.6 Legal Framework Opportunities

Given that chapter six discusses the legal and policy operating frameworks, and subsection 8.5.1.4 presents findings on the readiness of the legal system for PPP road project investment, the discussions in this subsection, therefore, are limited to legal framework opportunities in the context of interview findings. The legal framework opportunities, according to the findings, relate to PPP Act safeguards, on-going development of legal frameworks by government, and other government support initiatives. Tables 8.6 and 8.7 below present findings on PPP Act safeguards available, and legal frameworks under development respectively. The section for comments in both tables captures supporting information from respondents, or section of the PPP Act/Policy, or Thesis reference, or researcher's contribution, or both, to the listed findings.

Table 8.6. PPP Act Safeguards as Opportunities for PPP Road Investments

Legal framework status	Findings	Comments
PPP ACT Safeguards	Provides for amendment of PPP laws	✓ There are a couple of things that we know will warrant an amendment soon or later..... (P6, 20:26). ✓ Section 50 of the ACT
	Promotes innovation	✓ Section 34 of the ACT, about unsolicited proposals ✓ Section 3(3.3) of PPP policy, specifically the objective on clear customer focus (emphases output specifications)
	Provides for arbitration and dispute resolution	✓ Section 49 of the ACT
	Provides for competitive and non-competitive procedures	✓ Sections 31-36 of the ACT
	Provides for disclosure of conflict of interest	✓ Section 48 of the ACT
	Provides for local content	✓ Section 3(f) of the ACT
	Provides for negotiations	✓ Section 35 of the ACT
	Provides for rigorous checks and balances	✓ Sections 15(2), 16(1h&2), 17(4), 20(2), 26(1-4) of the ACT
	Decentralises project identification and initiation at contracting authority level	✓ Section 21 of the ACT
	Breaks monopoly and associated complacencies and weaknesses of conventional procurement	Creates an avenue for an alternative where conventional procurement may not be the best option

Source: Author

Table 8.7. Work in progress Legal Frameworks as Opportunities for PPP road Investments

Legal framework status	Findings	Comments
Work in progress	Developing PPP regulations	The PPP regulations are still being drafted. (P5, 7:28)
	Developing PPP guidelines	PPP guidelines are before the parliamentary council for approval. (P5, 20:23)
	Developing a PPP tool kit	Refer to subsection 8.7.3.3 of the Thesis
	Amending of the Roads ACT (of 1949)	...the draft roads bill is right now at cabinet, when passed into law will regulate toll collection and toll revenue management (P4, 8:16).
	Amending land acquisition procedures	Subsection 6.3.5 of the thesis
	Developing road tolling policy	Section 6.5 (paragraph three) of the Thesis
	Improving legal frameworks for the construction industry	The legal framework is being improved to effectively regulate operators and achieve the construction sector initiatives (P7, 3:27). [SIC]
	Developing policies limiting employing of foreign semi-skilled labour	Government is soon coming up with restrictive policies. ...before a company employs foreign semi-skilled labour will have to prove beyond reasonable doubt that such labour is not available in the country. (P9, 24:32).

Source: Author

Furthermore, respondents reported other government support interventions, which included: the BUBU policy initiatives (which is about using Ugandan labour and materials) and supporting frameworks as already highlighted in subsection 8.5.8; the tax waivers and exemptions, which include selective corporation income tax waivers (refer to subsection 8.6.5 National budget (2017/2018:94)), and exemptions on importation of vehicles and heavy equipment for registered contractors of government projects (P9, 24:35). Finally, the government provides logistical, financial and technical support towards the development of PPP legal frameworks (P7, 17:34).

In conclusion, while findings suggest a number of opportunities from the legal frameworks, a couple of factors may, however, bog down the anticipated opportunities. These include the existing uncertainty

about the public agency responsible for tolling (see subsection 8.6.2.2), the poor structuring and constitution of the PPP committee, failure of the PPP Act to provide for land acquisition and renegotiations, and the current weak PPP laws and structures that are already frustrating investors (refer to subsection 8.5.5 for more obstacles). Examples of projects being frustrated and delayed because of weak legal and structural systems include the KJE (for land acquisition and procurement of SPV etc.) and KEE (for tolling of the expressway) for the road sub sector, as well as the Uganda Peoples Defence Forces (UPDF) and the Justice, Law, and Order Sector (JLOS) housing projects. Actually, according to a respondent, *some funders had come with money to invest in the JLOS PPP project, but they lost interest and went away* (P7&8, 1:55). Finally, on the poor structuring and constitution of PPP committee, a respondent explains that, *the PPP committee was detached from practical operational requirements of the key contracting authorities. It has no representation from MoWT, and Ministry of Energy and Mineral Development. Yet these are the agencies that would design, implement and propose the highest number of PPP projects. The PPDA Authority too was not represented, yet you cannot isolate PPPs from public procurement because that is where the procurement expertize comes from* (P10, 16:44)2. [sic].

8.6.7 Viability of road toll revenues

Findings link road toll revenues in Uganda to road user and private sector (SPV) opportunities. Regarding the road user outlook, findings suggest that toll roads will enable quick response to emergencies, be safer because of minimised road accidents, allow faster speed and shorter travel times, be cheaper than using ordinary roads because of minimised vehicle maintenance and fuel consumption costs effects, and tolls will incentivize the private sector (SPV) to provide better services. The payment of road tolls, therefore, becomes worthwhile to road users. Pointing to KEE, two respondents argue that, *the cost of missing a flight is far much higher than the cost incurred in toll fees* (P6, 26:19)2, therefore, *people faced with such dilemma would not hesitate to use a fast moving road and pay tolls* (P3, 20:11). Furthermore, another respondent states *that travelling from Kampala to Jinja using KJR* (refer to subsection 5.5.1), *you need a minimum of 2 hours because of the poor road condition and traffic jam. Yet if you used the proposed KJE, it would on average take you less than an hour because the design of the road permits vehicles to travel at 120 kilometers per hour, and is gentle, wide and safer. Moreover, the road will have a full time operation and maintenance contractor on site to clear up any incidents and provide first aid* (P14, 7:60). [SIC]. In effect, the above two examples suggest that PPP road users in Uganda will receive better road services by saving on travel time and fuel, and reducing road accidents and wear and tear of the vehicles, as well as travel related fatigue, inconvenience and business losses.

On the other hand, findings confirm that PPP toll roads will be viable to the private sector because of the strategic location of the proposed PPP roads, the anticipated high toll revenues, the continuous increases in vehicle purchases, fast growing commercial businesses, and high traffic congestion on ordinary roads. Actually, the strategic location factor seems to explain all the aforementioned opportunities. Firstly, all the current proposed PPP roads are to be constructed in urban areas in and around Kampala, the only capital and city in Uganda (see subsection 5.5.1); *where the businesses community is flourishing and the elite class lives* (P12, 6:40). Secondly, the construction of KJE and KEE has been given first consideration by government because of their superior location over the rest of the proposed PPP road projects. While KJE will be located on the northern corridor that carries huge exports and imports to and from Mombasa for Uganda and other neighbouring countries (mainly Rwanda and Democratic Republic of Congo), KEE leads to Entebbe international airport, the only airport in Uganda and moves many passengers including cargo in and out of the country. The above scenarios imply that the private sector might generate reasonable revenues because of the already existing high travel patterns, the high domestic and international trade, and the exposure and capacity and need for faster movement by certain classes of people.

In conclusion, PPP toll roads pose opportunities to both the road user and the SPV companies, as discussed above. However, the viability of the proposed PPP roads may be affected by the following factors: the uncontrolled or regulated provision of alternative free access routes that may reduce traffic volume on toll roads; the bad PPP experiences (refer to subsection 8.5.3.4) which are likely to reduce public and investor support; the uncertainty by the public about toll fees to be charged (refer to subsection 8.7.2.2); the many PPP road proposals within the same geographical area with few vehicles, and finally, the uncertainty about traffic volumes because *very few Ugandans own or have access to private vehicles* (P8, 24:30) and the volatility in traffic volumes because *road traffic is only high during a few hours of the morning, afternoon, and evening* (P14, 26:48).

In summary, section 8.6 has presented and discussed findings about prospects for developing road infrastructure through PPP mechanisms under the six themes of citizen support/benefit, public road agencies, global partners, private sector, viability of toll revenues and legal factors. Public road agencies, legal frameworks, global partners, and legal frameworks findings (i.e. prospects) were further sub-grouped as opportunities to and from global partners comprised of foreign private sector capacity, benefits to foreign companies, and intergovernmental organisations' support. Public road agencies opportunities included bundling of project tasks and private sector participation benefits, while legal framework opportunities included PPP Act safeguards and work in progress frameworks. Furthermore, findings for each of the themes in this section was counter-argued with potential and visible obstacles to future prospects. Finally, the next section presents and discusses findings on the PPP CSFs for developing road infrastructure in Uganda.

8.7 CRITICAL SUCCESS FACTORS

This section identifies and groups CSFs based on the PPP challenges, PPP readiness inadequacies, and obstacles to current and future PPP opportunities raised in this chapter, as well as factors directly mentioned by respondents as critical to the planning and implementation of PPP road projects in Uganda. Given that the public sector has the ultimate responsibility of ensuring public projects are delivered within time, quality and cost requirements, the CSFs presented in this section become focal pointers towards effective planning and implementation of PPP road projects (Maseko, 2014:132). Unlike most studies that impose generalised factors from literature on different environments (as evidenced in subsection 3.3.2), the PPP CSFs suggested in this chapter are more country and road sub sector specific because they originate from the respondents themselves through interviews. However, given the methodological inadequacies that may be associated with any study (as already highlighted in subsection 3.3.2.2), the whole of subsection 3.3.2 would be relevant to consider for Uganda's PPP environment since it provides a concrete discussion and full list of common PPP CSFs from across the globe. The findings associate CSFs for PPP road development in Uganda to capacity building, risk assessment and management, tolling management, legal system, right of way, negotiation, investment climate, stakeholder management, and participation of the local private sector. A detailed presentation and discussion is provided below.

8.7.1 Capacity building

Inadequate and insufficient human resource and structure capacities continue to hamper the planning and implementation of PPP road projects in Uganda. To demonstrate the magnitude of this problem, views from two respondents are presented. One argues that, *many public officers are willing to push the PPP agenda but they fear to make mistakes because they have limited competencies and capacities* (P3, 8:12) [sic]. This is corroborated by another respondent who states that, *the way PPP projects are being developed here, you realise people are just swimming in unknown waters. They are scattering things as they go, and this drags PPP processes* (P4, 30:15). In order to remedy this situation, this study provides a list of capacity building related CSFs gathered from the entire group of respondents below.

Table 8.8. Public Private Partnership critical success factors as a requirement for capacity building

Fast track full staffing, building of capacity, and adequate funding for the PPP Unit, and equipping the PPP committee with required skills. Fast track building capacity and creation of PPP Sub-Units or Cells in road agencies. Develop skills and empower contracting authorities to handle PP P processes. Employ innovative, creative, and competent personnel, and skilled PPP procurement teams. Prioritize capacity building for the local private sector and apprenticeship for university students.

Source: Author

8.7.2 Risk assessment and management

Based on the premise that project risks at times emerge because PPP CSFs issues are never addressed well (Wang, 2015:687), effective risk assessment and management therefore becomes critical to the execution of PPP road projects in Uganda. For example, a respondent states that, *we usually go wrong on feasibility studies* (P3, 21:9), while another indicates that, *unless government signs performance based contracts, private companies will be sluggish in performance* (P7, 23:27)2. Specific to feasibility studies, as Osei-Kyei and Chan (2017:118) assert, the profitability or viability of PPP projects is dependent on thorough and detailed feasibility studies. Tables 8.9 and 8.10 below provide macro and meso, and project and organisation level CSFs, respectively, as gathered from respondents.

Table 8.9. Public Private Partnership Political and Financing (Macro and Meso levels) CSFs as a requirement for risk assessment and management.

Ensure high political interest and support, and divorce political interference in PPP operations. Create harmony among politicians, and encourage political engagements with citizens on national PPP agenda. National budgets must provide for subsidies. Government must guarantee revenue, loans and foreign exchange to the private sector, and such schemes should not be affected by changes in political leadership. Lobby for more funding from development partners.

Source: Author

Note that funding from development partners is vital because either money comes in as a grant, or at much lower interest than any private company would provide. Furthermore, political engagements with citizens on national PPP agenda becomes vital because politicians have popular support and trust from the communities they represent.

Table 8.10. Public Private Partnership project and organisation (micro level) CSFs as a requirement for risk assessment and management

Develop a database for bankable PPP road projects. Have well-structured projects and packaged in sizeable lots. Construct wide and high quality roads. Institute strong axial control system. Match road designs with projected traffic volumes. Provide security (a 24-hour surveillance) and the roads should be well lit (especially at night). PPP contracts should be reasonably long in duration. Adopt performance-based contracts. PPP contracts must dedicate fair budgets to the operation and maintenance of projects. Conduct sound and comprehensive feasibility studies, financial modelling and analysis, willingness to pay surveys, and value for money assessments. Viability assessments for projects must continue until contract termination. Ensure effective and continuous monitoring, supervision and evaluation of project performance. Engage a strong team of transaction advisers, and have skilled contract structuring and management teams. Share and allocate project risks to parties with the best capacity to manage them. Transfer substantial risk management responsibilities to the private sector.

Source: Author

While respondents suggested transfer of substantial project risks to the private sector (as captured in table 8.10 above) because of the current enormous capacity limitations by government, however, doing this without a lot of intellect may seem attractive in the short run but may turn out to hurt public interests in the future (Wang, 2015:693). Therefore, government must take sound precautions. In addition, having road projects packaged in sizeable lots ensures that structured projects do not become too small nor too large for the private sector to afford or participate in. Finally, an intensive discussion on PPP risk management was undertaken in subsection 3.3.5, though not specific to Uganda, but the issues therein are vital in shaping the PPP transition in country.

8.7.3 Tolling management

While tolls are key to the sustainability of PPP road projects, however, because road infrastructure has for long been provided by government, the recent private sector provision of road infrastructure through direct user tolls, especially in Africa, often attracts negative perceptions and protests from the public (Osei-Kyei & Chan, 2017:118). Consequently, the projected traffic volumes upon which private sector returns mainly accrue become difficult to attain. Wang (2015:693) and Osei-Kyei and Chan (2017:119) attribute low traffic volume on toll roads to inaccurate traffic predictions, economic downturn, improvements on competing free access roads, and locating toll roads in communities dominated by low income earners who cannot afford paying user fees repeatedly. On the other hand, using a Ugandan example, a respondent argues that, *KEE may have high vehicle traffic from Kampala to Entebbe International Airport and back, because air transport passengers can afford paying tolls* (P9, 30:42). Overall, there was consensus among the respondents that direct road user tolls in Uganda would only

be viable in the GKMA. Note that sections 4.3 and 4.4 discuss tolling practices and PPP road experiences across the globe, and these provide key lessons for a PPP emerging nation like Uganda. In fact, these two sections (4.3 and 4.4) provide much more than what the respondents provide in this empirical study. Table 8.11 below provides CSFs as per the responses of the interviewees.

Table 8.11. Public Private Partnership critical success factors as a requirement for Road Tolling Management

Allow very few and unavoidable toll exemptions. Automate tolling systems. Charge varying toll fees. Discount tolls for frequent users. Provide better road services and charge affordable toll fees first time and always. Toll charges must be commensurate with the level of service provided. Develop a program for maintaining and operating alternative parallel roads. The private should collect tolls on behalf of government, but government must oversee the revenue collection processes. Government must subsidise revenues from tolls. Government must set toll fees in consultation with the private partner. Never change existing free access roads to toll roads. Redirect traffic to tolled roads (when toll roads have low traffic while ordinary roads are too congested). Government must have a sound toll collection and revenue administration system. Toll fees must factor in inflation. Toll revenue must not be part of the consolidated Fund. Toll roads must have alternative parallel free access routes. Toll roads must meet the economic viability criteria. Toll roads must not be congested. Toll roads are viable in urban areas on routes with high traffic volume, and with many middle or high income and faster movers. Charge tolls on per tolled road stretch accessed but not per Km travelled. Excess revenue collected from tolls must be shared between the public and private partners.

Source: Author

While respondents had mixed responses (that is, yes or no) on toll exemptions, this study recommends provision of very few and unavoidable toll exemptions (as highlighted in table 10 above) because the majority of the interviewees supported toll exemptions. For example, a proponent for toll exemptions argues that, *government vehicles, ambulances, NGO vehicles, and vehicles for all international agencies (e.g. UN, UNHCR etc.) should be exempted. These are here for our good, so why charge them* (P15, 25:49). Meanwhile, an opponent to toll exemptions argues that*…..if you think the political class, cabinet ministers are VVIP to be toll exempt, then State House should meet their bills, otherwise me and you will pay on their behalf through tax hikes* (P22, 20:92). Finally, automating tolling systems becomes relevant for Uganda because it would assist government not only to easily match toll revenues remitted against the cars that will have used the road in the reporting period, but also enables faster movement without unnecessary stoppages to pay toll fees at tollgates. Note that explanations of the rest of the CSFs (highlighted in table 8.11) can be drawn from sections 4.3 and 4.4 (as aforementioned).

8.7.4 Legal System

Effective legal and regulatory environments not only support and guide the implementation of PPP projects per se, but also smoothen partnership relations (Wang, 2015:693). However, given the PPP legal matters discussed in this chapter and in section 6.5, it is clear that the PPP legal system in Uganda is incomplete and with gaps. As such, this makes the implementation of PPP projects unrealistic and unachievable. Table 8.12 below provides legal related CSFs gathered from respondents that can improve the operating environment.

Table 8.12. Public Private Partnership critical success factors as a requirement for legal system strengthening

Regulate and monitor closely private sector interests (e.g. payment of tax obligations, profitability ambitions etc.). Dedicate enough resources to the development of the PPP laws and systems. Harmonize PPP laws with other national and international laws. Must have sound legal and regulatory frameworks. PPDA or IPPU should be represented on the PPP committee. Funding for road construction must be secured before contract signing. PPP Unit should operate in semi-autonomous manner. Government must formulate a policy that supports contractor financing. Strict compliance with PPP laws. Unsolicited proposals should be limited and well regulated

Source: Author

Note that private interests must be closely monitored and regulated (as highlighted in table 8.12 above) because some private companies have in the past evaded, and others under-declared, their revenues in order to dodge or pay less in taxes. For instance, in 2010 Heritage Oil and Gas Ltd never remitted $405m to URA after selling the company's 50% interests in oil blocks to Tullow Uganda Ltd. This culminated in international court cases and, according to a respondent, *the private parties are usually interested in arbitrations just to make money* (P8, 8:27). Furthermore, the PPP law should be backed by other laws, which either need to be developed or amended. For instance, the Roads Act that was developed in 1949 is not only outdated but also does not provide for road rolling, the tolling policy is non-existent, and the land acquisition system for government investment projects must be improved.

8.7.5 Right of Way

In addition to discussions in this chapter, refer to subsection 6.3.5 and section 6.5 for a detailed account about the land problem in Uganda, especially regarding government investment projects. Land for PPP roads has become too problematic; for example, even after officially opening KEE for public use on 15

June 2018, land compensations were still ongoing. Table 8.13 below provides CSFs drawn from the views of the respondents.

Table 8.13. Public Private Partnership critical success factors as a requirement for smoothing land acquisition

Improve the land tenure system. Project land must be acquired before construction can commence and must be without any encumbrances. Property and land compensation or resettlement must remain a responsibility of government.

Source: Author

8.7.6 Negotiation

Negotiations oil the processes of allocating and sharing of project responsibilities, risks, costs and benefits among participating parties (Glumac, Han, Schaefer & Van der Krabben, 2015:67). Therefore, the ability by both the public and private sector parties to negotiate well is a key facilitator for excellent project performance expectations. However, as already captured in this chapter, the government of Uganda has had bad PPP deals simply because neither does it have internal negotiation capacities nor does it recruit external skilled negotiators. Like in Uganda, a study conducted by Maseko (2014:137) on CSFs for PPPs in South Africa, establishes that poor negotiations by government emanate from fraud and corruption, lack of a clear vison and strategy, poor or non-existent intellectual property management strategy, lack of skills transfer, lack of skilled personnel, unconducive legal frameworks, lack of decisive PPP transformation, and political bias and interference. Subsequently, this prompts costly and unnecessary renegotiations for the government (Carbonara *et al.*, 2015:180). Refer to subsection 3.3.5.1b for a detailed account on renegotiations. Given the above arguments, the government must therefore negotiate well for project success (as is the practice with private sector players) or else underestimate the power of negotiations and continue to register unprecedented project failures. Table 8.14 below provides CSFs expressed by the respondents.

Table 8.14. Public Private Partnership critical success factors as a requirement for effective negotiations

Government must build internal capacity in PPP negotiations, must have skilled negotiation teams and must at all times engage professional negotiators. Both public and private parties must negotiation to achieve win-win outcomes. Government must ensure renegotiations are kept at minimum.

Source: Author

8.7.7 Investment climate

Notwithstanding a few PPP readiness factors discussed in section 8.5, largely the PPP investment climate in Uganda is moderately poor. As such, it is no surprise that President Museveni often cautions MDAs to provide a conducive environment to investors, for example, *URA to provide a favourable tax regime, Registration Bureau to quicken the registration process, Ministry of Lands to provide more flexible land leases, and Bank of Uganda to manage the fiscal system to control the errant skyrocketing dollar rates* (P10, 7:62). Note that an intensive discussion on PPP investment challenges and measures taken across the globe is provided in section 4.2, and referring to it is vital because it avails enormous lessons for Uganda's current and future PPP situations. Table 8.15 below provides CSFs based on the responses of the interviewees.

Table 8.15. Public Private Partnership critical success factors as a requirement for improving the investment climate

Provide and allow ancillary facilities and services to supplement toll revenues. Benchmark private sector returns with international rates. Capitalise Uganda Development Bank. Introduce a PPP viability gap Fund. Make the proposed project development Fund operational. Government must build confidence from private sector. Stabilise the economic environment.

Source: Author

Because some of the CSFs captured in table 8.15 above seem to appear for the first time in this study, this study casts light on them as follows. The Uganda Development Bank should lend to private local firms at very low interest rates to boost their competitiveness over foreign firms. The PPP viability gap fund should support (in the form of grants) economically/socially justified projects which would be financially unviable without government involvement. The project development fund should provide funds to facilitate preparatory and planning processes of projects. Finally, the writer agrees with Wang (2015:693) that governments should introduce innovative financial tools to supplement private investments and increase project viability, and in Uganda's case, ancillary facilities and services (as suggested in table 8.15 above) is proposed as one such innovation.

8.7.8 Stakeholder Management

The numerous parties and tasks embedded in PPP arrangements make PPP projects much more complex than other procurement systems to synergise the diverse interests of stakeholders and build up effective long-term relationships among them (Zou, Kumaraswamy, Chung & Wong, 2014:265 & 272). As such, prudent and professional management of stakeholder interests and influence remain paramount to PPP

project success. Given that subsection 3.3.4 broadly discusses stakeholder management in a PPP setup, the information therein is worth considering for an emerging PPP economy like Uganda. Table 8.16 below provides CSFs based on the opinions of the respondents.

Table 8.16. Public Private Partnership critical success factors as a requirement for effective stakeholder management

Encourage multi-stakeholder participation and management. Conduct PPP outreach and sensitization programs to contracting authorities and communities. Protect public interests. Sensitize the public about the relevance of road tolls.

Source: Author

8.7.9 Participation of the Local Private sector

Respondents predominantly mentioned local content as a critical sustainability mechanism for PPP projects, especially in terms of future national capacity, rather than continuing to rely on foreign companies with their associated costs. While there was agreement that Uganda cannot do without foreign companies because of the current local capacity inadequacies, however, foreign firms are blamed for having no interest in transferring technical skills to the locals. This is exhibited by respondents who argues that,….*Ugandans are left to be flagmen or ladies on construction sites, and the cycle continues, that after 10 years the same foreign companies come back to reconstruct or maintain the road* (P14, 23:37) because *foreign companies never mentor our technical staff* (P8, 15:26) to be able to take over from them in future.

Whereas domestic developers could not execute all PPP projects because of an enormous lack of local capital and expertise (Osei-Kyei & Chan, 2017:119), the interest of Ugandans is, however, in the locals doing all the work where local capacity is available, as government and the local private sector take decisive measures to developed more capacity. Furthermore, while the majority of the respondents castigated the local labour for gross indiscipline and having a poor attitude towards work (refer to section 8.4.9), however, one respondent argues that the problem is lack of supervision; *Just like the Chinese will give you a bad road if not supervised. But improve on your supervision the local labour will definitely give you an excellent road* (P18, 19:65). Table 8.17 below provides CSFs based on the suggestions of respondents.

Table 8.17. Public Private Partnership Critical Success Factors as a Requirement of Local Labour Empowerment

Build and promote local construction industry. Government must be strict on foreign firms transferring skills to locals. Local financing institutions should be involved in PPP road projects. Local labour must be closely monitored and supervised. Local labour should be subcontracted. Support local capacity through preference and reservation schemes. PPP contracts must be structured in a way that promotes local participation. Semi-skilled labour must be provided by the locals. Support joint ventures between foreign and local companies.

Source: Author

In summary, section 8.7 has presented and discussed findings of PPP CSFs for PPP road development in Uganda under the themes of capacity building, risk assessment and management, tolling management, legal system, right of way, negotiation, investment climate, stakeholder management, and participation of the local private sector. Note that risk assessment and management CSFs were further sub grouped under political and financing, and project and organisation findings. The next section presents and discusses findings on the PPP best practices for road development in Uganda.

8.8 PUBLIC PRIVATE PARTNERSHIP BEST PRACTICES

Based on the interview responses, this section presents best practices for PPP road infrastructure development in Uganda. Note that PPP best practices universally apply to all PPP projects globally no matter the PPP project type, the geographical jurisdiction of the project or a country's PPP maturity level. While compliance with best practices may depict a poor or good trend, the respondents, however, tended to limit PPP best practices to PPP problematic issues in the country. The findings include: Benchmarking from PPP road experienced countries, especially to draw lessons for developing interconnections with other modes of transport, and project success as a whole; Due diligence, especially on the reputation record of companies by conducting background checks about their experience and overall capacity before engagement; Competition among bidders, especially for procurement processes; Accountability through engagement of and reporting to stakeholders and audit trails, and clear separation of regulatory and technical responsibilities; Practising democracy and good governance, fairness, openness and transparency, innovation, sustainability, trust, value for money, balancing PPP success outcomes, and commitment. Table 8.18 below provides clarity on some of the best practices aforementioned using verbatim from respondents.

Table 8.18. Best Practices and Corresponding Verbatim from Selected Respondents

No	Best Practices	Verbatim of respondents
1	Competitive tendering	Unlike the KEE project (subsection 8.5.3.4), *the KJE is competitive because it is already being tendered worldwide*. (P6, 20:25) *Advertise PPP projects or agenda in both international and local media to attract foreign and local players*. (P2, 24:9)
2	Due diligence	*You must have a good profile of the private player*. (P2, 24:39)
3	Balance PPP success	…you have to be careful because you may have a very beautiful and quality road but when its return on investment is terrible and loss making. (P6, 26:21).
4	Commitment	*If we end up squabbling PPPs, like we squabble every project, potential PPP partners will take their money to other countries*. (P4, 12:22) *Stick to the PPP contract up to the end because if you go half way and pull out, the penalties can be very high*. (P6, 12:34)

Source: Author

In conclusion, because this section entirely relies on views from respondents, it provides limited PPP best practices in both number and explanation. However, subsections 3.3.1 and 9.4.7 fill the gap because they provide a well-synthesised presentation and discussion of PPP best practices (captured as PPP principles and PPP project process best management practices respectively) from literature. The two subsections (3.3.1and 9.4.7) not only explain factors already raised by the respondents but also provide a detailed list of PPP best practices that would deliver PPP success to any government.

8.9 CHAPTER SUMMARY

The study set out to investigate the suitability of the PPP environment in Uganda for road infrastructure development. The findings have shown mixed signs of favourable and unfavourable PPP environments, though the unfavourable outweigh the favourable factors. Findings position the road sub sector in Uganda in the initial stages of PPP planning and implementation trajectory, with government efforts currently focused on the first two of the pioneer PPP projects, KEE and KJE. Contextually, PPP knowledge and exposure among the public, private and civil society organisation sectors and among the citizens, for both the lower and the elite classes, is very low. While there is enough justification (motivations) and opportunities (prospects) for undertaking road infrastructure development through PPPs, however, the challenges and obstacles are enormous against meagre readiness levels. Actually, both governance and financial perspectives at macro, meso, and micro levels in the planning and execution of PPP projects in the country, raises great concerns over the future of PPP programs in the road sub sector. To remedy the current worrying PPP performance status, the study provides PPP CSFs and best practices tailored to the road sub sector in Uganda, but also makes references to other general all-inclusive sectors' PPP CSFs and globally PPP acceptable practices.

9 CHAPTER 9: A SUITABLE PUBLIC PRIVATE PARTNERSHIP GOVERNANCE MODEL FOR DEVELOPING ROAD INFRASTRUCTURE IN UGANDA

9.1 INTRODUCTION

With a public sector viewpoint, the study ultimately sought to develop a suitable PPP governance model for developing road infrastructure in Uganda. The motivation for setting this goal accrued from four fundamental strands. Firstly, globally the successes and failures of PPP projects compete neck and neck. Secondly, PPP projects have had serious governance problems in all sectors in Uganda. Thirdly, slow progress surrounds the planning and implementation of Uganda's PPP road network projects. For instance, since 2009 to date none of the first two PPP road infrastructure projects (KJE and KEE) prioritized by the government has yet procured a PPP SPV contractor or a PPP operation and maintenance provider respectively (refer to chapter 8 and section 5.5 for details). Fourthly, previous studies provide PPP models that partially address PPP governance dimensions.

In developing a suitable PPP governance model for Uganda, the study made use of the extant PPP governance models, and findings from literature and documentary analysis and empirical study chapters of the Thesis. The study guarantees the credibility of the developed model by customising information from extant PPP models, and literature and documentary analysis chapters to the empirical study findings. To realize the model development objective, the chapter is organised in four sections of: a summary of theory and practice chapters, a summary of extant PPP governance models, construction and discussion of the suitable PPP governance model for developing road infrastructure in Uganda, and the contribution of the developed Public Private Partnership governance model.

9.2 A SUMMARY OF PUBLIC PRIVATE PARTNERSHIP THEORY AND PRACTICE FOR THE CONSTRUCTION AND DISCUSSION OF A SUITABLE PUBLIC PRIVATE PARTNERSHIP GOVERNANCE MODEL FOR UGANDA'S ROAD SUB SECTOR

In the overall study, PPP theory and practice are represented by chapters 2, 3, 4 and 5, 6, 8 respectively. Provided in the next two subsections is the type of investigation and major finding (s) for each of the aforementioned chapters.

9.2.1 Investigations and overarching findings from Theory

Chapters 2, 3, and 4 used information mainly from literature search and reviews; and the outcomes of these processes are summarized as follows.

Chapter 2: Explored the understanding and contribution of infrastructure development and public private partnership. Three major findings emerge from the chapter. Firstly, a typical PPP road project consists of both hard and soft infrastructure services, and combining such services to engage a single consortium, or very few private sector contractors, becomes ideal. Secondly, while many scholars define PPPs by integrating three fundamental concepts of contractual, project functions and partnership orientations, some perceive them differently ideologically or depending on the interventions of the project, or the interests of the beneficiaries. Finally, although PPP infrastructure could have a greater impact on economic and social development, this remains limited because the public sector in practice promotes less co-regulation, co-production, co-responsibility, and relational governance.

Chapter 3: Explored the key elements of an effective PPP governance structure for infrastructure development. Findings indicated that the PPP operating environments are very complex, intricate and with many uncertainties. Therefore, key PPP elements identified in this chapter for effective governance of PPP projects included: promoting best practices (PPP principles) in all PPP systems, structures and processes; effective implementation of critical success factors; effective management of stakeholder interests and influence; effective PPP risk management; and continuous improvement of the PPP maturity factors.

Chapter 4: Investigated the international public private partnership experiences and PPP road project practices to draw lessons for Uganda's road sub sector. Three major findings emerge from the chapter. Firstly, regardless of a country's level of development, PPP road projects experience both positive and negative outcomes. Secondly, governments in collaboration with other stakeholders respond appropriately to avert the effects of economic and financial predicaments on the progress of PPP projects. Finally, apart from a few exceptions, countries across the globe have similar tolling practices.

9.2.2 Investigations and overarching findings from Practice

While chapters 5 and 6 used secondary data mainly through documentary analysis, chapter 8 utilised primary data by interviewing selected respondents, and the outcomes of these processes are summarized as follows.

Chapter 5: Examined the impact of road sub sector reforms on road infrastructure performance in Uganda. The findings showed that while the road network would reduce the costs of living and doing business in Uganda (refer to sections 1.2 and 5.2), ordinary road infrastructure remains underdeveloped and PPP road projects experience slow progress because of lack of resource capacities and compromised governance systems and practices.

Chapter 6: Discussed the legal and policy frameworks that support PPP road investment projects and programs in Uganda. The chapter's findings indicated that although a number of legal and policy frameworks to support PPP interventions are available, some of the critical legal and policy frameworks are either non-existent, outdated, and having major gaps/inadequacies or both.

Chapter 8: Empirically investigated the suitability of the PPP environment in Uganda for road infrastructure development. The study applied a holistic investigation and data analysis approach on the PPP environment in Uganda with a focus on the road sub sector, and established PPP understanding levels, motivations, challenges, readiness levels, prospects, critical success factors, and best practices that may support or derail PPP investment programs or projects. Overall findings indicated the existence of both favourable and unfavourable PPP environments for road projects in Uganda, though the unfavourable outweigh the favourable factors. Figure 9.1 below provides abridged findings under each of the aforementioned factors/themes, and detailed findings for each theme can be accessed in chapter 8.

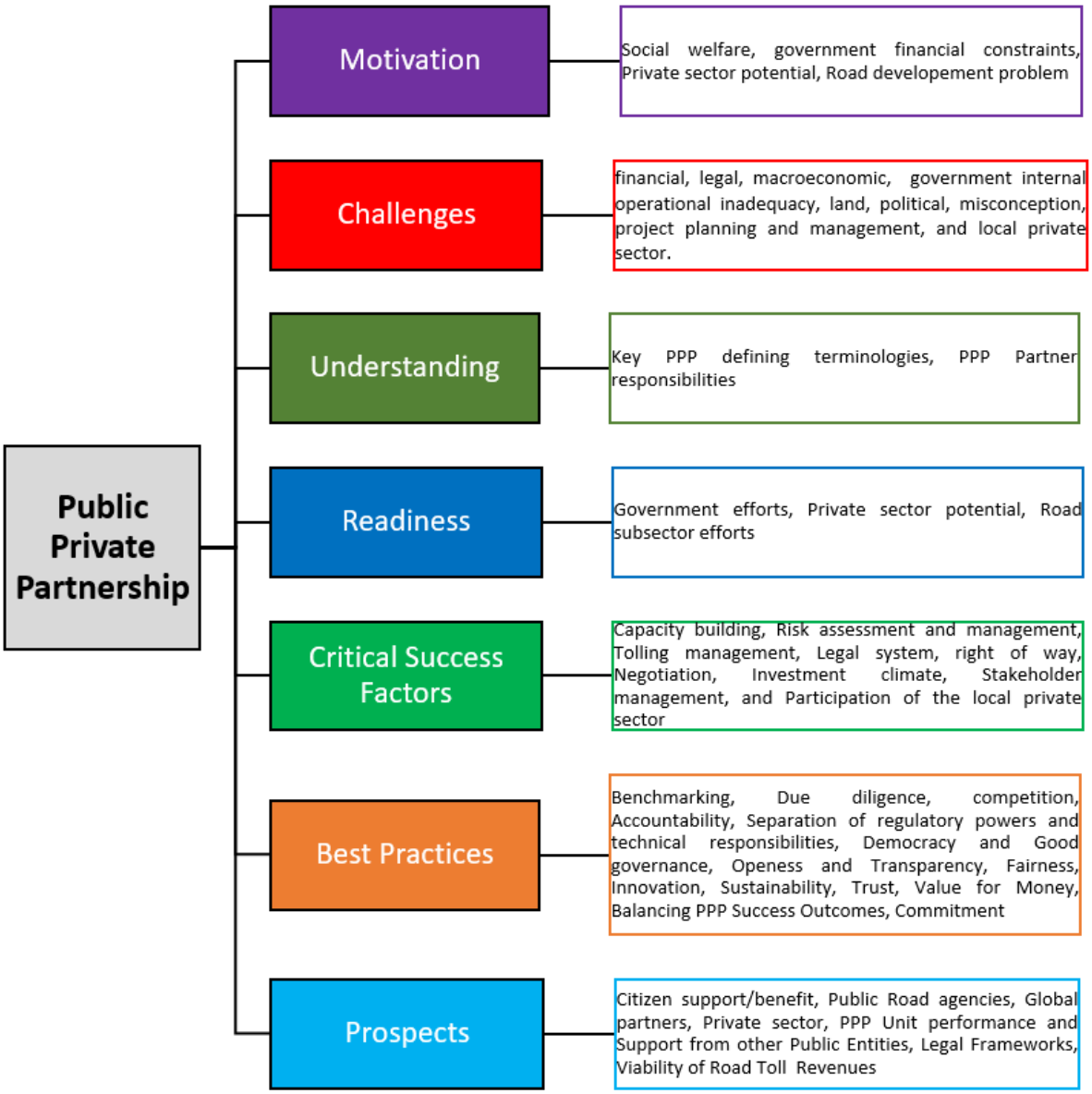


Figure 9.1. A Pictorial Summary of the Theme and Sub-Theme level Findings from the Empirical study chapter.

Source: Author

Given that the empirical study covered almost all the spheres of the PPP operating environment, and because effective data collection and analysis was undertaken (refer to chapter 7), it provides detailed and more accurate information for developing a comprehensive model that can significantly address most of the PPP governance issues for road infrastructure in Uganda.

9.3 A SUMMARY OF EXTANT PUBLIC PRIVATE PARTNERSHIP GOVERNANCE MODELS FOR THE CONSTRUCTION AND DISCUSSION OF A SUITABLE PUBLIC PRIVATE PARTNERSHIP GOVERNANCE MODEL FOR UGANDA'S ROAD SUB SECTOR

This section presents key issues emerging from eight extant PPP governance models relevant for developing a suitable PPP governance for Uganda's road infrastructure. The eight extant PPP governance models consist of three for risk management, three for critical success factors, one for financial and economic management, and one for stakeholder management, as presented in subsections 9.3.1, 9.3.2, 9.3.3 and 9.3.4 below. The study used more than one extant model because no single previously developed PPP governance model could address the majority of the PPP governance issues discovered in theory and practice.

9.3.1 Public Private Partnership Critical Success Factors Models

This subsection presents three PPP critical success factors models and describes how each of them enhances PPP project success. Of the three models, one is by Chan *et al.* (2010) while the other two are by Liu *et al.* (2015), as explored below.

Chan *et al.* (2010:492) developed a five-factor groupings model for PPP CSFs and showed how each of the five factor groups relate to one another. Chan *et al.*, suggested that a transparency and efficient procurement process group (with 3 factors), a shared responsibility between public and private sectors group (with 4 factors), and a judicious government control group (with 1 factor) should be executed in a systematic order within the project lifecycle. Meanwhile, a stable macroeconomic group (with 6 factors), and a stable political and social environments group (with 4 factors) have to be continuously considered in all the project lifecycle stages because of their crosscutting impacts on PPP performance. In summary, whereas Chan *et al.*'s (2010) idea of CSFs groupings within a project life cycle is a great innovation, their model, however, limits CSFs to only ex ante project processes, yet a real project lifecycle should include both ex ante and ex post CSFs.

Liu *et al.* (2015:4) developed a project success logic model (figure 9.2 below), which introduces a dual factor consideration of product and project management factors that provides a balanced view about CSFs and results for PPP project success. In fact, scholars have concentrated more on CSFs for PPP product success and hardly mention CSFs for PPP project management success. Yet focusing on having the final PPP product per se without proper management of project processes (project management), not only curtails the achievement of PPP outcomes or goals (product), but also affects the effective use of inputs and production of right outputs. Figure 9.2 below confirms that project success is achieved through effective management of both product and project management factors.

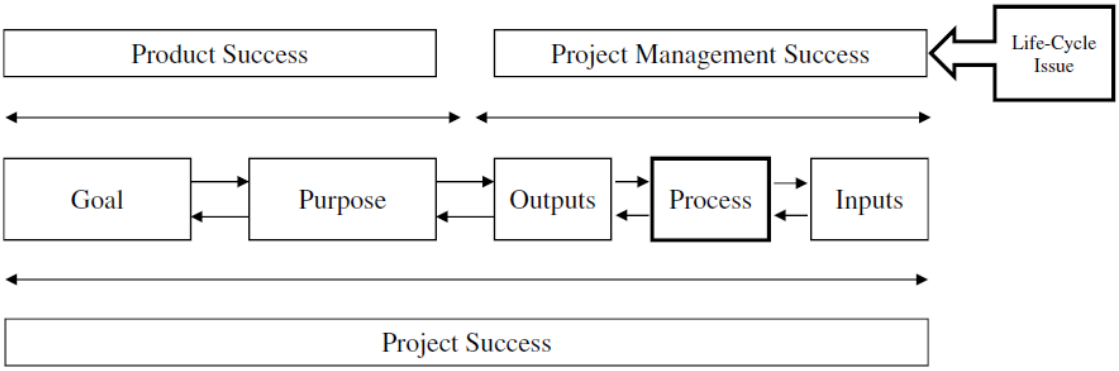


Figure 9.2. Project Success Logic Model

Source: Liu *et al.* (2015:4)

Examples of product CSFs include good governance, trust, accountability and transparency, while those for project management CSFs include effective evaluation for PPP initiation and planning, effective negotiation frameworks, and effective safety management and health control (refer to subsection 3.3.2). By identifying and evaluating the performance of both product and project management CSFs based on a project lifecycle perspective, the project success logic model supplies a holistic approach.

Furthermore, using the analogy of project management success as demonstrated in figure 9.2 above, Liu *et al.* (2015:5) developed a PPP project life-cycle CSFs phased evaluation model. The model emphases a "phased-based" measurement evaluation, which aims at monitoring and assessing the performance of a PPP project as it progresses (Liu *et al.*, 2015:4-5), as opposed to the conventional "product-oriented" measurement which only evaluates the performance of an already completed project. Liu *et al.* (2015:4) argue that "the 'product-oriented' evaluation cannot effectively assist project managers to control and improve processes designed for the delivery of an asset". Hence, the need to evaluate PPP performance using a "phased-based" lifecycle measurement approach.

9.3.2 Public Private Partnership Risk Management Models

Covered in this subsection are three different but interrelated PPP risk management models by Awodele (2012), Soomro and Zhang (2013b), and Carbonara, Costantino, Gunnigan and Pellegrino (2015). Provided below is a description of how each of the models developed by the aforementioned authors enhance PPP project success.

Awodele (2012:259) developed a model for managing risk in privately financed market projects in Nigeria. The model integrates generic risk management processes within the PPP systems and project processes for Nigeria. The model affirms that effective identification, assessment, allocation,

monitoring, evaluation and management of PPP project risks is realizable when done systematically and matched with PPP project processes and tasks, and PPP structures and systems of a country.

Soomro and Zhang (2013b:11) developed a cause and effect model for PPP risk failures in the transport sector along the PPP project life cycle phases, and demonstrates that each risk cause/driver has an intermediate or ultimate effect, or both. For example, improper demand forecasting at the pre-tendering phase causes low traffic demand at project operations, and the same factor of low traffic demand at the same phase of project operations causes low revenue generation, which finally cause concessionaire insolvency (Soomro & Zhang, 2013b:11). This implies that some risks are closely associated. The model further indicated that a single risk could occur or affect different phases or tasks within a phase of a project. As such, risk identification and mitigation become complex processes that require robust management approaches and commitment of the right, and enough resources.

Finally, Carbonara *et al.* (2015:168-170) identified common exogenous and endogenous PPP risks at individual project phases and those that cut across the motorway project lifecycle phases, and subsequently developed mitigation measures for each of the identified risks using a step by step approach. A combination of the risk identification and mitigation frameworks by Carbonara *et al.*, makes what our study terms as "exogenous and endogenous PPP risk identification and mitigation model" (refer to table 2.4). Whereas the model emphasizes identification and management of both internal and external risks unique to each phase, as well as risks that are universal to all phases of the project life cycle, unfortunately it assumes that the identification and mitigation of each risk can be done independent of other project risks. However, the cause and effect PPP risk failures model developed by Soomro and Zhang (2013b: 11) fills this gap.

9.3.3 Public Private Partnership Financial Model

Only one extant financial model by Kurniawan, Mudjanarko and Ogunlana (2015) was used, because Kurniawan *et al.(*2015)'s model seems more comprehensive and simple to understand and apply (especially for new PPP adopters like Uganda) compared to other financial models developed, say by Khmel and Zhao (2016: 143), and Kumar, Jindal and Velaga (2018:4-18). By definition, PPP financial models are tools for assessing the viability of new projects based on both economic and financial project assumptions to facilitate and support contract negotiations, bidding processes, appraisal reporting, risk allocation and sharing, tariff adjustments and project performance monitoring and evaluation (Kurniawan *et al.*, 2015: 124&128). Though serving different stakeholder interests and project purposes, financial models are very vital at project pre-proposal, contract negotiation, financing mobilization, construction, and operation stages, as demonstrated in table 9.1 below.

Table 9.1. Key Users of Financial Models and Their Interests within the PPP project Lifecycle

Stakeholder	Description	Stage
Authority	Evaluate the estimated cost of two procurements either PPP or public sector comparator (PSC).	Pre-proposal stage
	Negotiate the risk sharing mechanism with the bidders and evaluate the competitive bidders' proposal.	Bidding and contract negotiation stage
	Evaluate a new tariff	Operation stage
Sponsor	Facilitate the submission of proposal	Pre-proposal stage
	Negotiate the risk sharing mechanism and capital structure of the project with other potential sponsor(s), lenders and the government authorities.	Bidding and contract negotiation stage
	Monitor and track the performance of the project.	Construction stage and operation stage.
	Negotiate a new tariff with the government authority	Operation stage
Lender	Modify the initial model to lender base case financial model in order to test the project's financial viability.	Finance-raising stage
	Maintain the financial model and monitor the project costs	Construction stage.
	Assess the impact of any annual operations budget submitted by the project vehicle to lenders	Operation stage
Consultant	Develop and audit the financial models.	Proposal stage, contract negotiation stage, finance-raising stage, construction and operation stage.
	Assist the sponsor, the lender and the government authority in evaluating the project.	

Source: Kurniawan *et al.* (2015:127)

For the public or private sector to execute the financial modelling task well, it must employ or appoint a competent financial advisor responsible for collecting relevant information in order to develop and utilize financial models. Highlights of information provided by key stakeholders include: fiscal incentives, loan and revenue guarantees, and tariff cap by government; project costs and management costs by SPV, construction costs by EPC; operation and maintenance costs by the operator company; and project financing information by lenders (Kurniawan *et al.*, 2015:127).

A standard PPP financial model utilises input worksheet assumptions, calculation of worksheet formulas and output worksheet assumptions to build economic and financial feasibilities for projects (see figure 9.3 below). The information/assumptions that feed into the input worksheets originate from stakeholders, projects documents and other relevant sources, and such information includes project timelines, economic indicators, technical data, cost of capital, loan commitment, project tenor and grace periods, loan type, interest rate and fees, repayment structure, target of equity, tax information, and working capital and reserves. The calculation worksheet formulas or formats utilize information from input worksheets to produce outputs. To conduct calculations, formulas or formats for use include income statements, balance sheets, cash flow statements, debt service coverage ratio, loan life cover ratio, net present value, interest rate of return and return on equity. Finally, the output worksheets extract information from calculation worksheets and use pro forma financial statements, and any other

information from the calculation worksheets, to visualize the economic and financial viability of the projects. In summary, the three financial outputs of revenues, net profit and internal rate of return would be enough to provide an appropriate strategy for setting and adjusting unit prices or costs periodically (Kurniawan *et al.*, 2015:128).

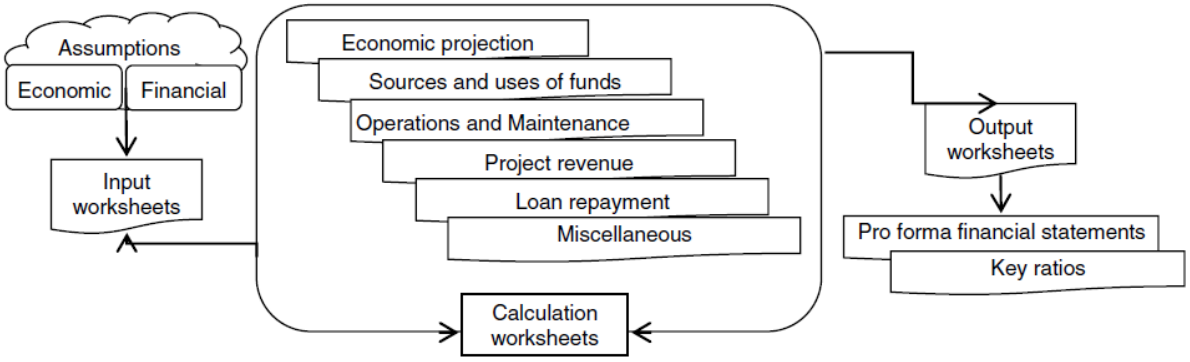


Figure 9.3. An Example of a Typical Public Private Partnership Financial Model

Source: Kurniawan *et al.* (2015:127)

The economic and financial feasibilities from the modelling exercise mainly address value for money interests of the public sector against projected expenditure and profitability or return on investment interests of the private sector. As such, financial models must harmonize the expectations and preferences of the various PPP project stakeholders, especially prior to financial closure. Furthermore, a continuous update of the model is unavoidable as the project progresses since stakeholders' interests, as well as the conditions within the project-operating environment, change over time. However, common criticisms of financial models is that they are prone to a number of errors and are hard to understand because of the complex financing transactions involved and the diversity of stakeholders' interests in PPP projects (Kurniawan *et al.*, 2015:124).

9.3.4 Public Private Partnership stakeholder organisations capability enhancement Model

Stakeholder organisation capability enhancement model was the only stakeholder management model used because it is easily adaptable to all stakeholder governance issues and sets standards for progressive factor improvement. Babatunde (2015) developed a PPP stakeholder organizations capability enhancement model (SOCEM) for Nigeria by applying PPP CSFs on the capability maturity model (CMM). The CMM, as used by Babatunde, is a five level assessment tool, represented as follows: Level 1-Ad hoc, level 2-Repeatable, level 3-Defined, Level 4-Managed, and level 5-Optimising. In order to generate robust predictions and make sound recommendations for project improvement, the assessment of any factor must systematically and in an ascending order go through all five levels. The meaning attached to each of the levels of the CMM is provided as follows. **Level 1-Ad hoc.** The

organisation capabilities are very immature and often characterised with difficulty in retaining talented individuals, chaotic processes, unpredictable project results, and the success of projects depends on individual efforts within organisations. Usually, organisations that would have recently adopted the PPP model, fall under this level. **Level 2-Repeatable.** This represents a slight improvement in capabilities compared to the ad hoc level. Possibilities of predictable project outcomes start to emerge, formal processes are introduced, and project commitments, resources, trainings, responsibilities and project activities are assigned and undertaken based on organisation policy. However, all the aforementioned processes and tasks are executed with a single unit/departmental direction instead of an organisation level focus. **Level 3-Defined.** An organisational management framework with standardised processes, systems, and methodologies able to capture and share best practices is established. Further, the organisation develops various workforce competencies in order to deliver on the organisation and business strategies with consistency across the organisation to achieve competitiveness. **Level 4-Managed.** Quantitative analysis tools and databases are developed to facilitate performance predictions that would enable sustainable capabilities and effective management of project processes and activities. **Level 5-Optimising.** This is the highest level of capability maturity, where organisations focus on continuous improvement through incremental and innovative processes, empowering individuals to improve processes under their control, and capturing lessons learned for corrective action using established feedback loops.

For demonstration purposes on how the SOCEM works, the study randomly choose and present only one (1) out of the 14 CSFs applied by Babatunde (2015). The SOCEM fitted findings from the 14 CSFs within the CMM as per the different stakeholders' opinions (through interviews), and provides standards for improving each of the CSFs along the different levels of CMM. Findings and standards for improvement for the selected CSF (political support) is presented in the respective upper and lower rows across the CMM levels in table 9.2 below.

Table 9.2. Stakeholder organization capability enhancement Model for Public Private Partnership infrastructure projects in Nigeria

CRITICAL SUCCESS FACTOR	Capability Maturity Levels for Public Sector Organizations				
	1 Ad hoc	2 Repeatable	3 Defined	4 Managed	5 Optimizing
Political Support	Lip-service by political leaders in supporting PPP projects. Project success depends on individual efforts.	Recognition the importance of political support to PPPs.	Strong recognition of the importance of political support to PPPs. Pockets of best practice evident.	The process is regularly and formally reviewed with input from other stakeholders.	Political support achieved. Continually improving process performance through an innovative process. Regular use of lessons learnt from international best practices and feedback loop in place to inform the satisfaction of political support for PPPs project.
	1. No stable environment to support process. 2. No proven process. 3. No tools and database in place. 4. Unable to repeat success. 5. Project success depends on individual efforts.	1. The process is introduced. 2. The process is evaluated for adherence to descriptions. 3. The process is controlled and monitored 4. Commitments are established among relevant stakeholders 5. Commitments are revised as needed.	1. Standard process is established. 2. The process is improved over time. 3. The process is more rigorous and proactive 4. Pockets of best practice evident. 5. Task orientation management.	1. Means for improvement are established. 2. Quantitative objectives for quality and process performance are established. 3. Organisational flexibility and willingness for change 4. The process is regularly and formally reviewed with input from other stakeholders. 5. Strong teamwork, even with external partners.	1. Using a quantitative approach to understanding process performance. 2. Continually improve on quality and process performance objectives. 3. Using sophisticated tools for both the qualitative and quantitative analysis for process improvement. 4. Enlightened leadership and management style. 5. Leverage a good relationship with other stakeholders, and develop a societal network and community relations.

Source: Babatunde (2015:206, 214 & 216)

SOCEM model becomes a useful tool for identifying and assessing strong and weak PPP operational factors, and provides a roadmap and guidelines on the priority areas at different capability maturity levels that would facilitate continuous improvement in organization processes in order to achieve PPP program and project sustainability.

9.4 CONSTRUCTION AND DISCUSSION OF A SUITABLE PUBLIC PRIVATE PARTNERSHIP GOVERNANCE MODEL FOR ROAD INFRASTRUCTURE DEVELOPMENT IN UGANDA

This section presents and discusses the public private partnership governance model suitable for road infrastructure development in Uganda. Construction of a suitable PPP governance model (figure 9.4 below) was based on the findings from both PPP theory and practice presented in the entire Thesis, as summarised in sections 9.2 and 9.3 above. As already mentioned in section 9.1, to create robustness in and credibility of the model, the findings from the extant PPP governance models (section 9.3), literature review (chapters 2, 3, 4), and documentary analysis (chapters 5, 6) were customised to the findings from the empirical study (chapter 8) to construct a suitable PPP governance model for developing road infrastructure in Uganda. The model consists of four main components, as depicted in figure 9.4 below. The first and the second components represent PPP best practices and critical success factors, and macro level assessment and management respectively, while the third and fourth components represent meso and micro assessments and management, and PPP project outcomes respectively. The aforementioned denotations of first, second, third and fourth components of the model represent the systematic order in which the model components would be executed under normal circumstances, as elaborated in the next paragraph. However, because the PPP environment is never static, the model therefore caters for back and forth movements of processes, as symbolised by the arrows in the model.

Fundamentally, the developed PPP governance model advances the need for comprehensive assessments of the PPP environment of a country, and effective management of PPP systems and project processes based on the conducted PPP assessment outcomes. The starting point of the model is to have PPP best practices and critical success factors established. Next, is to create assessment and management systems/frameworks for the overall PPP environment (macro, meso and micro) levels. Then follows conducting of assessments and management for all the other components of the model based on the available assessment and management systems, best practices, and critical success factors by beginning with macro, and later the meso and micro level components. At the macro level, it begins with establishing government's motivation for PPP adoption, and proceed to assess the PPP operating environment and managing challenges identified therein, as well as creating PPP understanding among stakeholders in order to create or improve PPP readiness. To further improve PPP readiness at the macro level, is promoting of partnership thinking among stakeholders and continuously improving PPP maturity, as well as managing any obstacles that would be caused by stakeholder interests, influence or both. Assuming that a reasonable level of PPP readiness has been identified or created at the macro level, it then proceeds to assess and manage meso and micro level PPP components. With meso and micro level assessments and management, it starts with the PPP project idea generation component,

proceed to the public investment management system (PIMS) component, and then the advanced PPP project management processes component, and ensure that risks within the overall project life cycle are effectively managed.

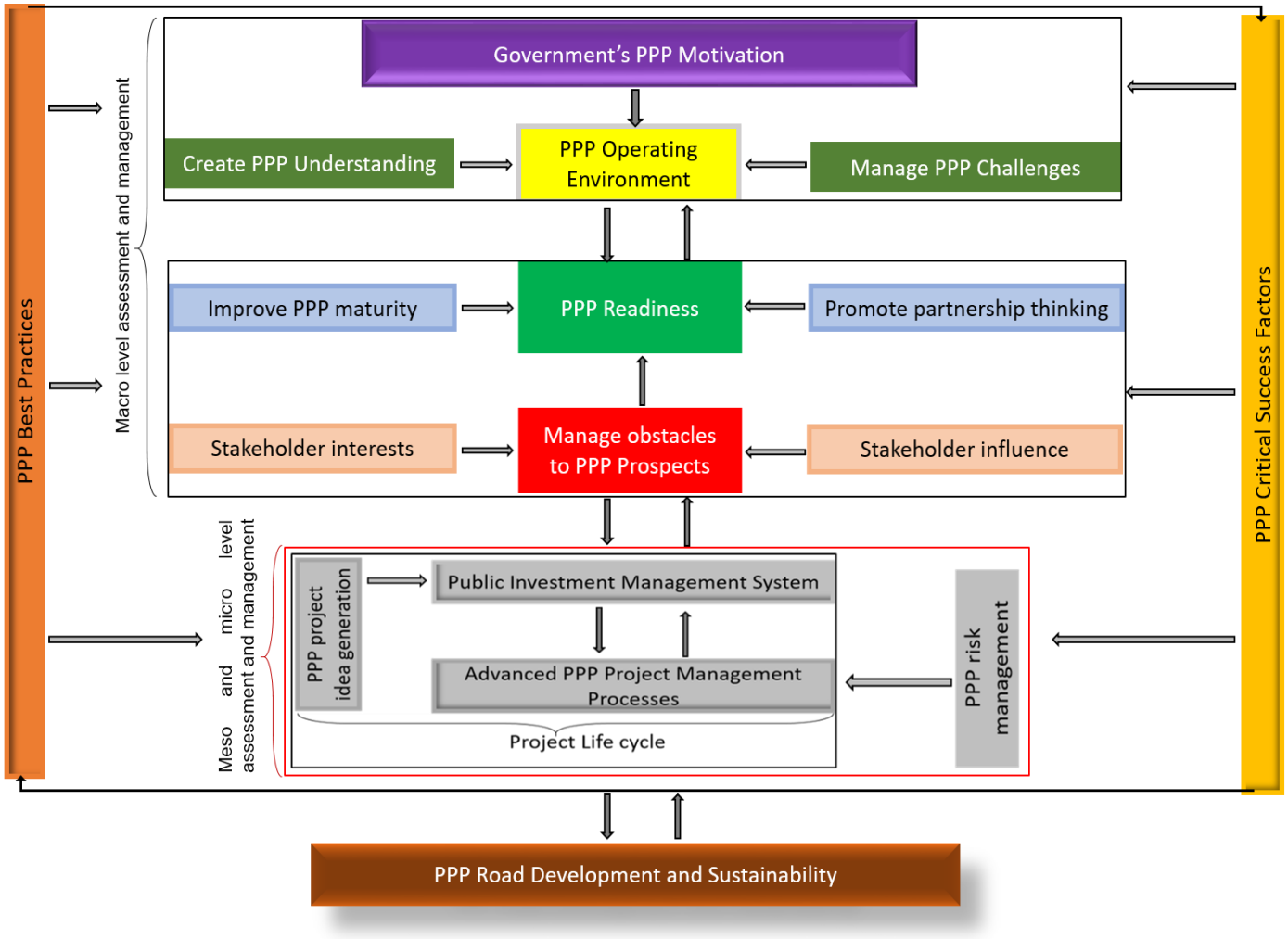


Figure 9.4. Public Private Partnership Governance Model for Developing Road Infrastructure in Uganda

Source: Author

In summary, the above model demonstrates at a glance that effective assessments and management of macro, meso and micro level PPP components (factors) would result in the realisation of PPP project outcomes that match the expected PPP road development and sustainability goal. In efforts to make the model more user friendly to the recipients, a discussion on how each of the components of the model works will be provided. Note that the relevance of the extant PPP governance models will be captured in a separate subsection (in 9.4.1 below) because no comprehensive discussions (other than the summaries provided in section 9.3 of this chapter) prior to this chapter have been undertaken in the thesis. On the other hand, because the theoretical and empirical chapters of the thesis were discussed comprehensively prior to this chapter, and in order to avoid duplication of work, reference to the aforementioned chapters or their relevance to the developed model will be integrated in the discussions of the individual components of the model.

9.4.1 The relevance of the discussed extant public private partnership governance models to the developed model

The contributions of the discussed extant PPP governance models (in section 9.3) to the advancements for the developed PPP governance model are provided below.

Critical success factors models. Chan *et al.* (2010) and Liu *et al.* (2015:5) in their critical success factors models make key observations towards better performance of PPPs, which suggest that: A phased approach to evaluation of projects enables risks or errors to be identified early and corrected with ease, rather than to wait to evaluate when the project has come to a complete end. Product (goal and purpose) CSFs must be matched with project management (inputs, processes and outputs) CSFs. Critical success factors must be assessed and managed using a project lifecycle approach. Critical success factors with similar characteristics produce greater impact when managed as a single group. Lastly, CSFs must be networked because of the causal effect relationship they have with themselves and PPP projects at large. It is the view of this study that the aforementioned contributions advanced by Chan and Liu for critical success factors, equally apply to and make PPP best practices effective for project success.

Stakeholder organisations capability enhancement model. The model advances the need to track progressive PPP improvement of personnel, organization or country based on formally set measurement standards of performance at different levels of the factor (s) maturity curve. Though Babatunde (2015: 206, 214 & 216) applied the SOCEM on CSFs, generally the model applies to all aspects of a PPP environment (e.g. best practices, risks and challenges, prospects and obstacles, motivations and readiness factors, among others) as long as the focus is on achieving continuous improvement.

Risk management models. Carbonara *et al.* (2015), Awodele (2012), and Soomro and Zhang (2013b) through their risk management models make the following contributions. It is good practice during the assessment and management of project risks to identify both internal and external risks at every stage of the project and provide mitigation measures for each of the risks, rather than generalising (Carbonara *et al.* (2015:168-170), as the saying goes, no one size fits all. Actually, even risks that cut across the project lifecycle can never have similar remedies because the magnitude of their impact varies across the different stages or tasks of the project. In addition, project implementation should never proceed to the next stage of the project lifecycle, or next task within the same project stage, unless effective risk assessment and management happens in a predecessor stage or task (Awodele, 2012:259). Failure to take such a stance has negative effects or produces more risks in subsequent project phases or tasks within the same phase (Soomro & Zhang, 2013b:11). As such, reluctance by one party to execute its responsibilities affects another partner's targets or performance, hence the need for all parties to a project to execute their tasks collaboratively. Finally, like advanced by Awodele (2012:259), no doubt the effective management of PPP risks largely depends on how well risk assessment and management frameworks are suited to a country's PPP structural and legal systems and the project lifecycle processes, as well as the level of their effective usage.

Financial model. A financial model, as advanced by Kurniawan *et al.* (2015), provide both economic and financial quantitative assessments, and supplements qualitative assessments in order to determine project viability as a PPP. For any serious PPP project, financial models become inevitable since they form the central focus for conducting and preparing pre-feasibility, and detailed feasibility studies and reports, respectively. The main contributions of financial models to PPP projects include: mutual agreement and risk sharing between public and private sector players; minimize renegotiations; ensure timely and effective bidding, negotiation and project evaluation processes; and enable making of appropriate financial decisions and sound predictions of project performances, both in the short and long term.

In summary, the extant PPP governance models suggest complementarity for PPPs and, therefore, fitting the philosophies of each extant model into the ideals of the developed model, would address PPP governance anomalies rather than becoming a mere theoretical advancement with less practical impact. In the next subsections, 9.4.2 to 9.4.7 below, is a discussion of the applicability of each of the components of the developed PPP governance model towards realising PPP road development and sustainability goals in Uganda.

9.4.2 Applicability of the PPP best practices and critical success factors components of the model

In the initial stages of PPP adoption, be it at national, sector/sub sector or contracting authority level, the assistance of consultants must be sought to establish the best practices and critical success factors together with frameworks or guidelines of their continued assessment, management and improvement. For purposes of creating sound and credible PPP critical success factors and best practices in both factors and frameworks, the contracted consultants must work alongside a nominated and appointed special technical team. The composition of the special technical team should be balanced to represent the interests of, or receive professional input from, the national public sector, private sector (both national and foreign), civil society, intergovernmental organisations (both from the African continent and outside Africa), and the academia.

Based on the above assertions, prior to any assessments (from macro-micro levels) of the other components of the model, both the PPP best practices and critical success factors must be known and frameworks/guidelines for their application and management formulated. This is because all the other components of the model use PPP best practices and critical success factors as benchmarking standards for their assessments and management. Neither the best practices nor critical success factors should be used in isolation of the other because they all influence the performance of one another towards realization of PPP project outcomes.

Key reference sections and subsections of this thesis relevant to the discussion in this subsection include sections 8.7 and 8.8 which respectively provide critical success factors and best practices for improving the governance of PPP road projects and agenda for Uganda, and subsections 3.3.1 and 3.3.2 which respectively provide detailed discussions on principles of PPP good governance (best practices) and critical success factors which provide general insights on how best to manage PPP projects. In conclusion, it is argued that from the results of the assessments, those best practices and critical success factors with low compliance and performance rates respectively, as well as critical success factors with greater impact on PPPs must be accorded more attention during PPP implementation for better performance.

9.4.3 Applicability of the PPP Assessment and Management component of the model

The macro, meso, and micro environments refers to PPP processes, systems, structures, capacities and decisions that have national, sector or sub sector, and contracting authority or project level impacts respectively. PPP national level decisions are mainly the preserve of parliament and cabinet; sector or sub sector level decisions are handled by ministries or committees or bodies overseeing and supporting the management of PPP operations in PPP contracting agencies, while micro level decisions are handled

internally by contracting authorities (refer to chapter 6). The assessment and management of macro, meso, and micro environments must be guided by both PPP best practices and critical success factors. The assessment systems, frameworks and criteria for all the components of the model, and how the processes thereof have to be conducted and managed at macro, meso and micro levels, must be available. Unfortunately, for Uganda, PPP assessments and management capacities and support (human resources, financing, logistics, structures, and legal frameworks) at all levels of the public sector are inadequate (refer to chapter 8).

9.4.4 Applicability of the Government's PPP motivation component of the model

On condition that best practices and critical success factors have already been established, the starting point at the macro level is to establish whether the sector or sub sector of the economy under study would be appropriate for PPPs. To earmark a sector or sub sector as suitable for PPPs, it is important to determine government motivations through preliminary assessment and management processes and seek agreement from key stakeholders. As such, for a sector or sub sector to adopt PPPs as one of the procurement modalities for undertaking investment projects, government motivations should be very clear and technically convincing, rather than following the dictates or selfish interests of those with great influence over government decision making processes. For example, although political support seemingly exists (refer to 8.5.1.1), no doubt political manipulations largely define and negatively affect PPP projects in Uganda (refer to 8.4.7). A project should only proceed to conduct a detailed assessment of the PPP operating environment when the PPP motivations/drivers have been justified. Specific to Uganda's road sub sector, refer to figure 9.1 and section 8.3 for highlights and a detailed discussion of PPP motivations respectively.

9.4.5 Applicability of the PPP operating environment component of the model

The PPP operating environment includes legal and regulatory, policy and institutional, political, economic and financial, social and eco environment, technical and technological factors. The main purpose of conducting a detailed assessment of the PPP operating environment is to establish whether there is a reasonable level of PPP readiness that would enable planning and implementation of PPP projects with less difficulty. Note that operating environment referred to in this subsection, based on the model depictions, is macro in nature, and therefore necessitate macro level assessments and management. The extant models discussed in section 9.3 become candidate tools of assessments and management. The most relevant for this level is the stakeholder organizations capability enhancement model since it has the capability to rank or determine the level of PPP maturity for any environmental factor across all assessment and management levels.

Based on the findings from the empirical study, Uganda's PPP operating environment is too weak with many challenges, and lacks PPP knowledge and awareness among many of the stakeholders (refer to sections 8.2, 8.4, 8.5, and 8.6). Therefore, management of PPP challenges and creation of PPP understanding becomes necessary for the improvement of the operating environment, which in turn would improve PPP readiness levels.

9.4.6 Applicability of the PPP readiness component of the model

PPP readiness is all about availability of sound and sufficient systems, frameworks, structures and resource capacities (e.g. human and financial) required to carry forward the PPP agenda. Assessment and management outcomes from the operating environment (macro level) becomes a basis for ascertaining the suitability of the PPP agenda at a national, sector or sub sector level. The empirical study findings indicated that the road sub sector in Uganda has very low PPP readiness capacities (refer to 8.4, 8.5 and 8.6). To improve PPP readiness, promote partnership thinking, continuously improve PPP maturity factors, and effectively manage stakeholder interests (own benefits) and influence (power/support) to minimise obstacles to the realization of PPP prospects (as shown in the model).

Both practice and theory emphasise partnership thinking in PPP arrangements (refer to 8.2 and 2.3.1 respectively). As per the public governance theories discussed in 2.4 and 2.5, partnership thinking interactions among PPP stakeholders begin to occur, develop and mature within the theories of new public management, new public service and public value, and new public governance practices respectively. Again, theory and practice suggest PPP maturity and stakeholder management considerations necessary for sustainable PPP management. Subsection 3.3.3 elaborately discusses how the general but pertinent stakeholder governance issues in PPP setting should be managed, and Table 8.18 of subsection 8.7.8 highlights PPP critical success factors of stakeholder management for PPP road projects in Uganda. Subsection 3.3.4 discusses PPP maturity, established Uganda's PPP environment maturity level being below the average of 50%, and this matches with findings of the empirical study in chapter 8. Based on the empirical study, the suggested critical success factors (in 8.7) and best practices (in 8.8) would close some of the aforementioned gaps at the macro level. In return, this would improve the PPP operating environment at the macro level, as well as assure effective planning and implementation of PPP projects at the meso and micro levels, on condition that project risks are well managed.

Notwithstanding low readiness levels of Uganda's road sub sector to plan and implement PPP road projects, as established in chapter 8, less developed PPP markets have the opportunity to leapfrog to more advanced stages of maturity (Eggers & Startup, 2006:6) because they can easily learn from and adopt more innovative PPP approaches from already developed PPP mature markets (See section 3.3.4). Based on this assertion, therefore, the whole of chapter four becomes very relevant for Uganda to draw

lessons from, both in the form of successes and failures of countries that have and still engage in PPPs in order to manage PPP initiatives better.

9.4.7 Applicability of the Project lifecycle components of the model

Meso and micro levels focus on the assessment of PPP project life cycle processes, structures, capacities and decisions, and the management of project risks therein. Actually, the central focus of meso and micro level assessments and management is to minimise or do away with both internal and external risks in the entire project lifecycle. In order to effectively control and mitigate project risk occurrences and their negative impacts within the project lifecycle, sound PPP structures, systems, processes and capacities must be created and employed at these two levels. Only external bodies, committees, and ministries, mandated by law to directly get involved in the planning and implementation processes for projects of contracting authorities, such as Sector Working Groups (SWGs), PPP Unit, MFPED, and MoWT among others, must make meso level assessments and decisions. Meanwhile, contracting authorities must undertake all micro level assessments and decisions within the legally set up structures, such as accounting officer, project officer, project teams and internal auditors, among others. However, for effective decision-making, collaborations and correspondences must take place across meso and micro levels of assessment and management. Refer to section 6.2 for details about key stakeholders at meso and micro levels together with their responsibilities.

The whole of chapter 8 has demonstrated lack of capacity by organisations at both meso and micro levels to manage PPP project processes effectively. Although no real PPP road project has yet contracted a SPV to undertake construction, the current experience with KJE and KEE projects as per chapter 8 findings suggest multiple risks ahead for PPP road projects. Given that PPP road projects are still in the planning phase of the project lifecycle, assessment beyond this phase provided limited information during interviews. However, Uganda can learn from the road cases, tolling practices, and management of financial hard times for PPP road projects by other countries, as provided in chapter four. Furthermore, subsection 2.3.3 provides PPP challenges/risks and mitigation measures at every stage of the project lifecycle, which Uganda should use as a guide to assess risks on the on-going and future road projects. Finally, section 3.3.5 discusses critical governance issues in the management of PPP risks that are worth considering as the country focuses on promoting PPP projects in the road sub sector.

After explaining the relevance of risk management and how it fits into the model, and how project risks ought to be governed, we now focus on the main components of the PPP project lifecycle. The developed PPP governance model summarizes the PPP project life cycle into three parts: project idea generation, public investment management system (of Uganda), and the advanced PPP project management processes (refer to figure 9.4 above). Note that a combination of project idea generation

and public investment management system forms what is termed as the preliminary PPP project management processes, which makes up the PPP project identification and development process phase, as presented in subsection 9.4.7.1 below. The advanced PPP project management processes consist of the detailed PPP project preparation process, the PPP project procurement process, and the PPP project implementation process phases, as per the presentations in subsections 9.4.7.2 to 9.4.7.4 below. The aforementioned four PPP project management process phases practically provide a firm base upon which project responsibilities are distributed and tasks executed to deliver public infrastructure facilities and services.

Given that Uganda lacks detailed and comprehensive PPP project management processes, this study uses PPP project management processes developed by EPEC (2011) alongside the existing Uganda PPP legal frameworks to suggest project tasks and PPP project process best management practices the Ugandan government should utilise to develop or improve PPP project processes and systems. Uganda's PPP legal frameworks mainly used in this subsection include the PPP Act, and the Development Committee guidelines for the approval and review of public investment Plan (PIP) projects. Provided in subsections 9.4.7.1 to 9.4.7.4 below is a discussion of the four PPP project management process phases of the project lifecycle of the developed model in their chronological order of execution. Each of the four phases consists of two stages, and each with key steps, tasks and PPP project process best management practices.

9.4.7.1 Public private partnership project identification and development process Phase

PPP project idea generation starts the project lifecycle assessment and management processes. The generation and development of the project idea must be based on the national development programme and sector or sub sector specific infrastructure development plans. After a contracting authority has identified a project idea and prefers implementing it as a PPP, it must then comply with the PIMS standards. Project selection and assessment of PPP option stages respectively meant for developing of a project concept note and project profile, and conducting a prefeasibility study form the main processes of this phase (refer to Table 9.3 below). From the time of project idea generation to the point of project prefeasibility study, project proposal assessments must strictly be undertaken within the existing public investment management system (refer to section 6.3.2, and Appendix A). After conducting prefeasibility study assessments, an appropriate decision out of the following three options must be made; either to recommend the project proposal as a PPP or an ordinary or a rejected project. While a rejected project comes to a complete stop, the PPP project proposal is channelled to the advanced PPP project management processes, as the ordinary project proposal continues to be implemented under the PIMS frameworks as a public procurement project.

Table 9.3. Stages of the Public Private Partnership Project Identification and Development Process Phase

Stage 1: Project selection	
Steps	Key tasks
project concept note	- Define the project - State the opportunity or problem to be addressed by the proposed project - State project objectives - State the estimated cost - State the desired project scope
project profile	- State project goal and outcomes - Establish project outputs and activities - Establish project inputs and key performance indicators - Identify potential project risks
Stage 2: Assessment of PPP option	
Steps	**Key tasks**
Prefeasibility study	Conduct analyses on; - Demand management - Technical capacity - Legal capacity - Human resource capacity - Environmental and social issues - Financial capacity - Economic issues - Stakeholder management - Risk management

Source: Modified from EPEC (2011:9) and Development Committee Guidelines (2016)

Based on information already presented, the main purpose for this phase is to develop a potential project idea, and thereafter conduct preliminary assessments to establish the viability of executing a proposed project idea as a PPP amidst other options (e.g. public procurement). Separately provided below are the main PPP project process best management practices for both the project selection and assessment of PPP option stages.

PPP project process best management practices for project selection stage. The contracting authority must prove beyond a reasonable doubt that the project idea has the potential to solve an existing problem or exploit an opportunity that would positively and significantly impact national development plan targets. The project specifications for the PPP option should be output based, while project specifications for the public procurement option should be input based. The processes used by the contracting authority or private company (for unsolicited proposals) to develop the project idea into a PPP project proposal must comply with the country's established and approved PIMS and the PPP Act.

PPP project process best management practices for the stage of assessment of PPP option. Conduct value for money assessment via a public sector comparator approach. Collect enough information and conduct rigorous data analysis to determine willingness to pay. Conduct effective traffic volume forecasts. Ascertain source of funding and plan to secure project funds prior to commencement of the construction phase. Allocate and develop effective measures of risk management. Ascertain the most applicable private sector revenue repayment mode (direct user fees or shadow tolls with or without subsidies). Ascertain the contracting authorities' PPP resource capacities. Project assessments and prefeasibility study recommendations (for either unsolicited proposal or project proposal originating from a public entity) must comply with the PPP Act provisions and the Development Committee Guidelines (2016). Develop a preliminary financial model.

9.4.7.2 Detailed Public Private Partnership Project Preparation processes

The purpose for this phase is to conduct detailed feasibility studies, and prepare and acquire all the required resources (documentation, human, finance, etc.) to later conduct procurement processes (refer to table 9.4 below). A PPP project proposal only becomes accepted as a PPP project upon preparation and approval of a detailed feasibility study. Short of that, the project proposal should either be transferred back to the public investment management system to be implemented as a public procurement project or rejected.

Table 9.4. Stages of a detailed Public Private Partnership Project Preparation process phase

Stage 1: Getting organised	
Steps	Key tasks
Set up project team and governance structure	- Set up the project management team - Define the PPP project governance structure
Engage team of advisers	- Identify the expertise needs of the team - Select the advisers to cover those needs
Develop project plan and timetable	- Identify the project activities and the critical paths - Develop a detailed project plan and time table
Stage 2: Before launching the tender	
Steps	**Key tasks**
Carry out further studies	- Prepare the detailed business case - Carry out a detailed assessment of the PPP project risks
Prepare detailed design of PPP arrangement	- Outline the principal commercial terms of the PPP contract - Build a detailed risk register - Undertake detailed commercial and financial analysis
Select procurement method	- Define the role of the private partner in the PPP arrangements - Select the procurement method
Select bid evaluation criteria	- Set up the evaluation committee - Select the criteria for scoring bids
Prepare draft PPP contract	- Define the required service standards, risk allocation and payment mechanism in detail - Finalise the draft PPP contract.

Source: Modified from EPEC (2011:15)

Separately provided below are the main PPP project process best management practices for both the "getting organised" and "before launching the tender" stages.

PPP project process best management practices for the stage of "getting organised". Develop a detailed and refined financial model. Appoint credible and experienced advisors (technical, financial, legal, insurance, regulatory risks, and environmental and social impacts). Have all the necessary approvals ready. The contracting authority should have secured enough financial resources to execute the preparation and procurement phase. Availability of a credible and well-resourced team for project preparation and procurement management. Realistic project procurement timetable should have been

developed (document development, stakeholder consultation, government approval process, bidding process and private sector interface).

PPP project process best management practices for the stage of "before launching the tender". The requirements and scope of the PPP project should be clear and fixed. All material environmental and planning approvals should have been identified and obtained. Site and land acquisition issues should have been resolved. The contracting authority should have the powers to award the PPP contract and enter into a long-term contractual arrangement. An updated value for money assessment for the proposed investment should have been done. Project risks and potential risk allocation should have been assessed. The plans to publicise the launch of the project should have been agreed upon and finalised. A project information memorandum should have been prepared. The bidder qualification and bid evaluation criteria should have been developed. The scope of the project should justify the contracting authority's periodic payment required (availability-based PPPs) or tariffs should be realistic and affordable to users (revenue-based PPPs). Government or parliament should have approved all proposed budgets and payment obligations by the contracting authority. Evidence of sufficient commercial interest from contractors, operators, lenders and investors should justify tender launch. A draft PPP contract should have been prepared, including the project specifications, service standards, payment mechanism and proposed risk allocation.

9.4.7.3 Public Private Partnership Project Procurement Process phase

The purpose for this phase is to initiate procurement and conduct bidding processes, negotiate with best-evaluated bidders and subsequently sign contracts with the most competent private sector partners that can deliver the desired value for money to the government. Prior to the actual undertaking of procurement processes, the detailed feasibility studies must have been approved and thorough preparation capacity created to handle the entire procurement processes effectively. Provided in table 9.5 below is a summarised account of the stages, and key steps and tasks of the procurement phase.

Table 9.5. Stages of Public Private Partnership Project Procurement Process Phase

Stage 1: Bidding process	
Steps	Key tasks
Procurement notice, prequalification and short listing	- Issue a public procurement notice - Send an invitation to prequalify to interested parties - Shortlist the bidders and publish a prequalification report
Invitation to tender	- Send an invitation to tender to the shortlisted bidders
Interaction with bidders	- Hold a bidders conference - Issue the necessary written clarifications
Evaluation of tenders and PPP contract award	- Select the preferred bidder
Stage 2: PPP Contract and financial close	
Steps	**Key tasks**
Finalise PPP contract	- Negotiate the PPP contract details with the preferred bidder - Implement non-material changes and sign the PPP contract
Conclude financing agreements	- Conclude the financing and ancillary agreement
Reach financial close	- Sign all PPP related agreements and meet all the conditions to the effectiveness of the agreements

Source: Modified from EPEC (2011:26)

Separately provided below are the main PPP project process best management practices for both the bidding process and contract and financial close stages.

PPP project process best management practices for the stage of bidding. The institution responsible for awarding and managing the bidding process should be known. The pre-qualification documents should enable bidders to present information about themselves and should clearly set out the evaluation criteria. All the pre-qualification processes should comply with legislation standards. The pre-qualification evaluation criteria should include all relevant features related to the capacity of the bidders to deliver and their awareness of the PPP project. The invitation to tender document should include a

draft PPP contract (with clear payment mechanism and penalty regime), output requirements, and all other essential components of the PPP project (minimum technical, environmental, legal and financial requirements). All the critical bidding process requirements (a code of conduct, communication with bidders, audit trails and meetings, consortia changes and bidders' due diligence) should be considered and implemented. The evaluation criteria and processes should be established, and evaluation teams and committees should be appointed before the submission of bids. Companies should bid as a consortium (SPV) to undertake the majority of the project activities (design, financing, construction, operation and maintenance), if not all.

PPP project process best management practices for the stage of PPP contract and financial close. A negotiating team should be assembled and empowered to make PPP contract based decisions. The public agency and the negotiating team should have agreed on the negotiating strategy. The legal advisers should have evaluated the marked-up draft PPP contract proposed by the bidders (based on risk allocation and value for money targets). Financial advisers should have assessed affordability, project costs, sources and costs of funding and project bankability. Negotiation results that vary substantially and materially from the bid offer should be open to challenge, as they may be less favourable or could have resulted in the selection of a different bidder. All the legal and administrative requirements of contract award should be complied with, and the final PPP contract should still be affordable and able to deliver value for money.

9.4.7.4 Public Private Partnership Project implementation process Phase

This phase addresses the common issues the contracting authority and contracted private parties may face during project implementation (construction, operation, maintenance, asset return/handover) up to the time of PPP contract expiry. The obligations for each of the parties to the contract should be clearly spelled out and relevant contract implementation and termination safeguards created. Provided in table 9.6 below is a summarised account of the stages, and key steps and tasks of the PPP project implementation phase.

Table 9.6. Stages of Public Private Partnership Project Implementation Process Phase

Stage 1: Contract management	
Steps	Key tasks
Attribute management responsibilities	- Set up the project management team - Develop a contract administration manual
Monitor and manage project delivery and service outputs	- Define a timeline and responsibilities for all tasks - Monitor the PPP project operational and financial performance
Manage changes permitted in the PPP contract	- Implement routine changes provided for in the PPP contract
Manage changes not provide for in the PPP contract	- Accept / reject extraordinary changes to the PPP contract - Implement protocols related to contingency plans
Dispute resolution	- Choice of the appropriate forum - Dispute resolution solution/ decision
When the contract ends	- Monitor the residual value of the PPP asset at critical stages - Replace non-performing parties - Make compensation payments.
Stage 2: Ex post evaluation	
Steps	**Key tasks**
Define institutional frame work	- Set up a reviewing body - Formalise the evaluation objects
Develop analytical framework	- Define the evaluation criteria - Produce the evaluation report

Source: Modified from EPEC (2011:35)

Separately provided below are the main PPP project process best management practices for both the contract management and ex post evaluation stages.

PPP project process best management practices for the stage of contract management. If possible, the same advisers that were used in the procurement phase should be engaged in contract management (but issues of availability, potential engagement, required budget and conflict of interest should first be addressed). Experienced advisers should be consulted to assist the contract management team to address sensitive changes to the PPP contract (refinancing, renegotiations). A contract administration manual should be available to match contract terms with contract management procedures, allocation of responsibilities and timetables. Guidelines to the contract administration manual should be developed to enable users to monitor contract performance. Payments to the PPP Company should be effected as per the PPP contract requirements. Continuous review and monitoring of project risks should be undertaken. Clear procedures for continuous monitoring of operational performance amidst trying to

manage contract changes should be in place. Mechanisms for ensuring continued value for money achievement after contract changes should be developed. Criteria and procedures for asset management and maintenance practices should be developed and agreed upon. A communication strategy on how regular reviews and updates will be provided to the PPP Company, users and other relevant stakeholders should be developed.

PPP project process best management practices for the stage of ex post evaluation. The primary focus of ex post evaluation should be agreed upon (may include the behaviour and effectiveness of the institutions and individual parties, the effectiveness of the procurement option, effectiveness of negotiations and contract award, the effectiveness in the performance and management of the PPP contract or all the issues in the PPP process phases). Information needs for ex post evaluation should have been identified and included in the PPP contract. The availability of instructions, resources, and high-level support should be accorded to the contract management team in order to acquire the necessary information for an ex post evaluation assessment. A timetable for ex post evaluation should be developed and approved, and meaningful data on performance should be obtained timely and used to inform current and future PPP processes.

9.4.8 Applicability of the PPP project outcomes component of the model

Overall, the purpose of the above PPP governance model is to facilitate positive project outcomes for PPP road development and sustainability in Uganda. Based on the presentation and discussions in the whole of this section (9.4), the effective use of the developed model will guarantee: road user/citizen satisfaction, affordability, minimised cost overruns, improved quality and quantity of road stock, improved road accessibility, road longevity/durability, reduced travel time and traffic jam, business profitability, reduced project delivery time, improved environmental and social compliance, delivery of road infrastructure faster rather than later, improvement in road serviceability (maintenance, operation), improved social welfare, added employment opportunities and improvement in employability, reliable road development and maintenance financing, and improvement in road safety.

9.5 CONTRIBUTION OF THE DEVELOPED PUBLIC PRIVATE PARTNERSHIP GOVERNANCE MODEL

The developed PPP governance model bridges the gaps in both theory and practice. Theoretically, previous PPP governance models partially address governance issues of PPP projects. For instance, the extant models discussed in this chapter each limited itself to a single PPP governance aspect e.g. risk management, critical success factors, financial modelling, and stakeholder management (refer to 9.3).

While from practice (based on the empirical study for this Thesis), in many respects, the undertaking of PPP roads projects in Uganda currently contravenes common PPP fundamental principles. Attestation to this assertion include the following examples, among others. Undertaking of PPP road projects without PPP regulations and guidelines. Toll revenue collection, for example, for KEE has not yet commenced because of lack of a tolling policy and a supporting road law. Road construction works commence before fully securing the right of way and compensating landowners. Government adopted PPPs for the road sub sector before building capacity and staffing of road agencies and PPP overseeing bodies (e.g. PPP Unit), and to date little has been done in this regard. It is not surprising that consultants are handling most of the PPP work that should ideally be earmarked for public officers. Furthermore, PPP awareness remains very poor among the public and private sectors, as well as the civil society and the citizens countrywide. Finally, about seven PPP road projects are being planned around a single main town (Kampala) against limited traffic volume.

Distinctively, this study develops a comprehensive PPP assessment and management governance model. Although the model was developed for the road sub sector of Uganda while using information mainly from PPP road projects, the flexibility embedded in the model makes it fit for replication in other sectors/sub sectors, and both developing and developed countries. Secondly, the model is easily adjustable to accommodate any other PPP governance variable that future researchers or practitioners may consider have been left out, or in the event that new issues in the PPP discipline emerge. Thirdly, most extant models, as exemplified by those used in this chapter, have been found to be useful PPP governance tools to enhance the usability of the developed model. Fourthly, the simplistic manner in which the model was designed makes it user friendly, even to less technical people. Lastly, and most importantly, the model provides a holistic PPP project environment assessment and management framework (the first of its kind) for Uganda's road sub sector, with a potential of solving the current and future PPP road governance issues.

9.6 CHAPTER SUMMARY

A suitable PPP governance model for developing road infrastructure in Uganda was constructed. The model has been developed in such a flexible manner that other sectors/sub sectors, mainly within the Ugandan economy, would use the same model but suited to their unique environments. Reference was made to extant models and all the theory and practice chapters of the Thesis in the construction of the model, to ascertain its robustness. Upon development of the model, a discussion on how each of the components of the model works, or what makes the model relevant to PPP project governance outcomes, was provided. Important to note about the PPP project life cycle component of the model, is that PPP best management practices were provided for each project stage. Further, the contribution of the model to both theory and practice was highlighted and justified. Finally, the users of the model must

appreciate that the model is not static. Therefore, continuous update of the model components or factors/status as assessments and management are undertaken, and project planning and implementation progresses, becomes inevitable since new issues may come up in due course.

The next chapter presents the conclusion, recommendations and areas for further research.

10 CHAPTER 10: CONCLUSIONS AND RECOMMENDATIONS

10.1 INTRODUCTION

Notwithstanding the fact that the road network carries over 90% of Uganda's total passenger and cargo traffic, and despite several road reforms that the government has introduced in the past, the country's road infrastructure remains poor and underdeveloped. Given that PPPs are assumed to unlock such infrastructure gaps (World Bank Group, 2012; Aigbavboa, Liphadzi & Thwala, 2014), this study therefore set out to investigate the suitability of Uganda's PPP environment for developing road infrastructure (chapter 8), and thereafter developed an appropriate PPP assessment and management governance model for Uganda (chapter 9).

In order to situate Uganda's PPP road infrastructure perspective into the existing theory and practice, five chapters (2, 3, 4, 5, and 6) had to be discussed prior to chapters 8 and 9. Chapter 2 investigated the understanding of public infrastructure and PPPs; chapter 3 contained the key elements of an effective PPP governance structure; chapter 4 discussed PPP road experiences and practices; chapter 5 investigated the evolution of Uganda's road sub sector and the future PPP projects; and chapter 6 provided the legal and Policy frameworks applicable to PPPs in Uganda. Apart from chapter 9 (which relied on findings from chapters 2-6 and 8), the data collection methods used for the rest of the aforementioned chapters are provided in table 10.1 below.

Table 10.1. Matching Thesis chapters with data collection methods used

Data collection method	**Chapters**					
	2	3	4	5	6	8
Literature review	✓	✓	✓	✓	✓	
Documentary analysis		✓		✓	✓	
Interviews						✓

Source: Author

The next subsection presents the contribution of the research and the experience of the researcher as the study progressed.

10.2 CONTRIBUTION OF THE STUDY

The contribution of this study is three fold. That is, theoretical, methodological and practical in nature.

10.2.1 Practical contribution

This is the first broad based study conducted on Uganda's PPP environment. The study provides relevant information on PPP government motivations, PPP understanding, PPP challenges, PPP prospects and obstacles, PPP readiness capacity, PPP critical success factors, and PPP best practices in and for Uganda, especially for road infrastructure development. Such information facilitates the various stakeholders (public sector, private sector, multilateral organisations, civil society, and the citizens/road users) to make informed PPP decisions.

Subsequent to the aforementioned discoveries from the interviews, a benchmark to literature, extant PPP governance models, and to the global PPP road practices and experiences was made to develop a suitable public private partnership governance model for developing road infrastructure in Uganda. The developed model (figure 9.4) is the first public private partnership assessment and management governance model in Uganda; and on a global scale, this may be the first comprehensive PPP governance model. For example, Yakubu and Anigbogu (2016:53) attempted to develop a PPP governance model (for Nigeria's housing sector) that takes into account the PPP operating environment, however they never delineated the macro, meso and micro environments, and limited the model to only PPP risk management (see figure 10.1 below).

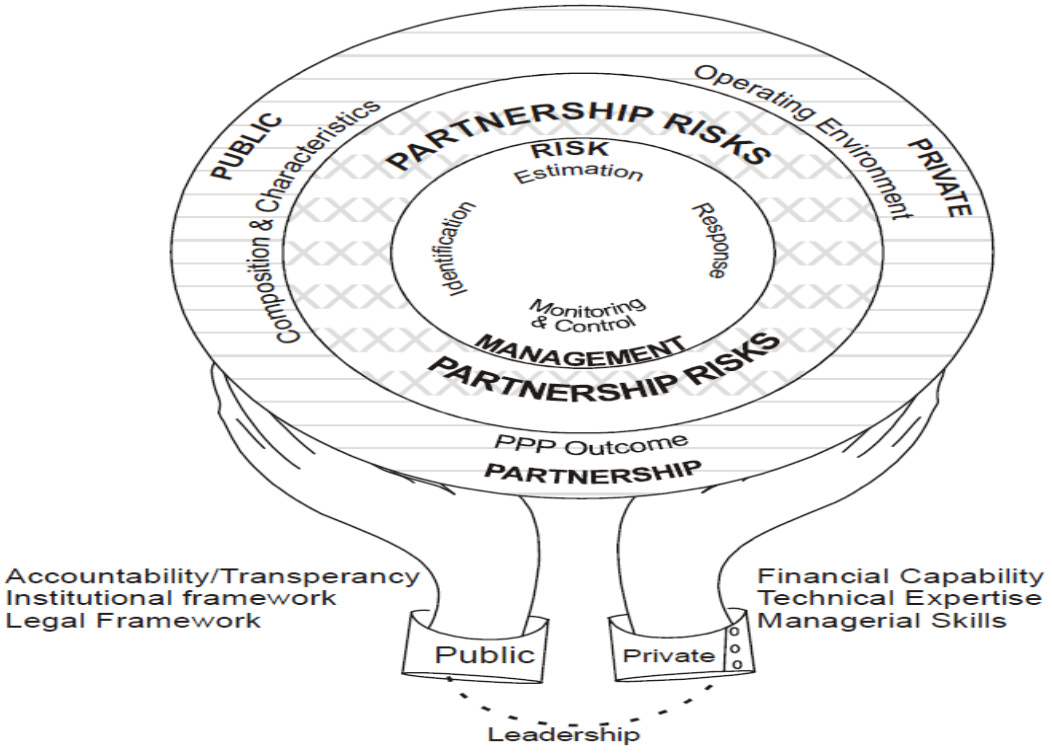


Figure 10.1. A Public Private Partnership Model for Managing Housing Development Projects

Source: Yakubu & Anigbogu (2016:53)

10.2.2 Theoretical contribution

The theoretical contribution consists of PPPs as a procurement model, appropriate theories for advancing PPP practices, and PPP critical success factors vs PPP best practices, as presented below.

10.2.2.1 Public private partnerships as a procurement model

Several studies have viewed PPPs from urban regeneration, policy, infrastructure, development, language game, moral regeneration, and financial perspectives (see subsection 2.3.2). Apart from a few scholars that incorporate the word procurement into PPP definitions (Willems & Van Dooren, 2016:203; Otairu *et al.*, 2014:191), no study has previously advanced the procurement management perspective. Contributing to the existing theory, this study has added a new PPP perspective of procurement management (subsection 2.3.2.6), and throughout the research, this study employed the procurement management perspective. In this Thesis, it is argued that the other PPP perspectives mentioned above feed into or are components of the procurement management perspective. For example, to prove that the financial perspective is part of the procurement perspective, no financing can be provided by the private sector through PPP arrangements unless they have been procured to provide such. Furthermore, while one may argue that procurement is just a single phase within the PPP project life cycle process (refer to section 9.4.7) to qualify as an overarching PPP perspective, such thinking in all respects would be null and void due to the following positions. Literally, procurement processes begin as early as project identification and development because the procurement team must be involved in project specifications development (refer to section 9.4.7). Furthermore, procurement processes end as late as the end of the project implementation phase (not at financial close) because the outcomes of the procurement phase must be followed through into the contract management and ex post evaluation stages of the PPP project (refer to section 9.4.7).

In fact, because existing theoretical and empirical studies have neglected the advancement of the procurement management perspective, practice has equally disregarded it. For this reason PPP operations, together with PPP Units, have globally remained under the direct control of the ministry of finance/treasury, yet public procurement (an alternative to PPPs) operations are managed under semi-autonomous powers. This largely cripples PPP progress in many countries, Uganda inclusive. Finally, the study clarified that while privatization is a service delivery model, it does not qualify as a public procurement option, nor as an equivalent of PPPs, as some scholars seem to suggest.

10.2.2.2 Appropriate theories for advancing public private partnership practices

Unlike the commonly used and generic theories for PPP studies, this study presents theories appropriate for PPP governance from a public sector perspective (refer to Section 2.4). The study considered the

most relevant theories of public sector governance, and concluded that traditional public administration theory is unsuitable for PPP arrangements, though often applied in real practice. The study, therefore, recommends four theories, namely new public management, new public service, public value and new public governance, as the most appropriate theories for effective governance of PPP operations. These theories advance networked systems that bring together all stakeholders (both major and minor ones) to collaborate on a common cause through co-regulation, co-production, co-responsibility, and relational governance practices. Actually, networking behaviour shows up in new public management, develops from new public service to public value, and matures with new public governance. Although new public governance dogmas are difficult to achieve completely in the real world, it is, however, the most rewarding theory ensuring high-level sustainable PPP practices and management.

10.2.2.3 Public private partnership critical success factors Vs Public private partnership best practices

While previous studies have treated PPP critical success factors and best practices (principles) as the same (refer to subsection 3.3.2), this study has demonstrated how different the two terms are in meaning and application (refer to sections 8.7 and 8.8). Critical success factors are core aspects of an activity or process in which favourable results are necessary for project success, while best practices are principles or standards of behaviours. A brief explanation of the distinctiveness of the two terms is provided hereafter. While some critical success factors are unique/specific to particular projects, even those critical success factors that are generic in nature, differ in their application from project to project depending on the operating environment. In contrast, PPP best practices are the same and universally apply to all PPP projects globally, irrespective of the PPP project type, the geographical jurisdiction of the project or a country's PPP maturity level. In summary, any attempt to handle best practices the same way as critical success factors would definitely produce compromised results.

10.2.3 Methodological contribution

Based on the experience of the researcher as the study progressed, the study makes three methodological contributions.

10.2.3.1 Literature review as a data collection method

Although rarely used and acknowledged in research as a data collection method, this study confirms and finds literature review a very useful method of data collection, especially when data is collected from empirical and published (journals) research, because such sources provide more trustworthy and insightful information.

10.2.3.2 Sample size for in-depth interviews

Although this study used 30 respondents, it was observed during data collection and analysis that with in-depth interviews data saturation may be reached after interviewing between 10-15 respondents, not the sample size of 25-30 as suggested by Dworkin (2012:1320). However, this is only possible on condition that a good interview guide has been developed, and both the interviewers and interviewees are knowledgeable in the subject under study, as well as experienced in conducting interviews and responding to interview questions. Studies that draw respondents from various categories, choosing an equal number of respondents for each category would be the best option to provide balanced responses in the data set. For example, since this study had five categories of respondents (i.e. private sector, public sector, civil society, intergovernmental organisations, and the academia) three interviewees from each category would have sufficed (5*3 = 15).

10.2.3.3 Data analysis for qualitative studies

The study discovered that, unlike quantitative studies, analysis of qualitative data begins as early as data collection and ends late into or after the discussion of the findings. The reason for this is that, grouping and regrouping, subgrouping and re-subgrouping of findings, and naming and renaming of codes (the minutest factors/findings) in qualitative studies continue even into the discussion of the findings.

10.3 SUMMARY OF FINDINGS

The presentations in subsections 10.3.1- 10.3.7 below are in line with the research objectives.

10.3.1 Understanding and contribution of public infrastructure and public private partnerships

In the whole of this subsection, public infrastructure is viewed in the context of public roads and PPP phenomenon because PPP road infrastructure was core to this study. A summary of the findings for this objective is presented under four themes, as depicted below.

10.3.1.1 Understanding of public road infrastructure

A typical road project consists of both hard and soft infrastructure services, and what is ideal in a real PPP environment is to combine such services to engage a single consortium or very few private sector contractors. This implies that many and small contracts must be avoided, and physical road infrastructure should not be viewed in isolation of support services.

10.3.1.2 Understanding of public private partnership phenomenon

Although stakeholders perceive PPPs differently ideologically or depending on the intervention of the projects, fundamentally a combination of three main concepts - contractual, project functions and partnership orientations - define PPPs. Therefore, PPP knowledge and awareness creation among the various stakeholders by the government and other partners is essential, especially for countries intending or newly implementing PPPs.

10.3.1.3 Contribution of public private partnerships (road projects)

Although PPP road projects improve social and economic welfare, they at the same time pose negative spill over effects on stakeholders and the economy as a whole. Therefore, the PPP operating environment must be well managed in order to realize the full potential of PPP road projects.

10.3.1.4 Theoretical underpinning

After review of several theories, PPPs were found not suitable under traditional public administration practices, instead they (PPPs) work well in environments that promote co-regulation, co-production, co-responsibility, and relational governance. Therefore, the need arises for governments to change from the traditional way of doing things to more innovative public service delivery practices.

10.3.2 Key elements of an effective public private partnership governance structure

Because PPPs operate in a multifaceted setting and are intermingled in various mechanisms of procedural, corporate, contract, democratic, intergovernmental, socio-cybernetic, and network governance, their operating environments become very complicated to manage. After review of relevant literature, the study established key elements for effective governance of PPP projects to include PPP best practices (PPP principles), critical success factors, stakeholder management, risk management, and PPP maturity. These are summarised as follows.

10.3.2.1 Promoting PPP best practices

PPP best practices provide behavioural standards for organisations, professions and individuals in order to respond to the collective problems of the citizens and to fulfil their needs in an appropriate and acceptable way. In this study, PPP best practices were found to include value for money, dispute resolution, innovation, participation, sustainable public management, transparency, accountability, networking, and trust; and these must guide PPP decision-making for all stakeholders, as well as implementation of PPP tasks across PPP projects.

10.3.2.2 Effective implementation of PPP critical success factors

Findings were drawn from both practice and research perspectives. Based on practice, each of the PPP critical success factors may have different impact levels on different sectors, actors, countries, and across projects. Therefore, the critical success factors with a greater contribution on project success should be accorded more attention and effort compared to those with a lower impact. While from a PPP scholar's perspective, research results may differ depending on the methodologies and the category of respondents used. Notwithstanding the dynamics of the different PPP operating environments or research patterns, it was observed that the critical success factors of a strong private sector, transparent procurement, and appropriate risk allocation and sharing deliver the greatest contribution to the success of any PPP project.

10.3.2.3 Effective management of stakeholder interests and influence

Findings indicated that PPPs have a multiplicity of parties with divergent roles, interests and concerns, and behavioural traits that disrupt project ownership and commitment among stakeholders. Therefore, establishing appropriate management processes for identifying, engaging and addressing stakeholder concerns, and reconciling their differences to realize full support, is critical to project success.

10.3.2.4 Effective PPP risk management

Generally, PPP projects are exposed to numerous risks, and to comprehensively understand and effectively manage PPP risks, they must be identified from their sources. It is implied that a positive impact on road infrastructure development is possible when PPP risks have been appropriately managed.

10.3.2.5 Continuous improvement in PPP maturity

Creating and developing robust PPP environments is dependent on a country's social and economic development needs measured against the capacity and willingness of the various stakeholders to devote sufficient resources in order to speed up road infrastructure development and improvements. According to Infrascope report data (2015), like many African countries, Uganda lies in the emerging PPP maturity market category with a below average PPP maturity score of 45.1% (see Table 3.7 and figure 3.9). The implication is that Uganda generally has a weak PPP environment. Therefore, great effort should be put into improving the PPP operating environment in the country.

10.3.3 International Public private partnership road experiences and practices

An investigation of international PPP experiences and PPP road project practices was conducted in order to draw lessons for Uganda's road sub sector. Lessons were drawn from bad economic and financial times, tolling policy practices and PPP road cases.

10.3.3.1 Lessons from bad economic and financial times

Governments, in collaboration with other stakeholders, respond appropriately to avert the effects of economic and financial predicaments on the progress of PPP projects. Some of the effects of economic and financial difficulties on PPP projects included reduced profitability and returns on equity, increased risk aversion of government, lower access to project financing, lower demand for facilities with a usage charge, reduction in PPP investment, postponement of implementing projects, increased interest rates, lack of capacity by credit markets to handle large projects, and challenging risk sharing and prolonged negotiation processes. This acts as a revelation for Uganda to create robust structures, systems and resource capacities beforehand for both internal and external current and future eventualities.

10.3.3.2 Lessons from tolling policy practices

Apart from a few exceptions, countries across the globe have similar tolling practices. Such similar tolling practices include using of real or shadow tolls on PPP roads, integrating both traditional and electronic means for toll collection, tolling policies provide for alternative routes, adjusting toll tariffs on an annual basis based on either inflation or internal rate of return, provision of discounts, enforcement of congestion pricing schemes especially in urban areas, and the provision of exemptions to vehicles that serve the interests of the general public or vulnerable groups. Therefore, as Uganda develops tolling systems, there is no need to reinvent the wheel, but rather borrow from frameworks of other countries and fit them into the local context.

10.3.3.3 Lessons from public private partnership road case experiences

No matter the level of development of a country, PPP road projects experience both positive and negative outcomes. Positive outcomes result from short-term scheduled payments based on the availability and quality of infrastructure or service, periodic growth of direct user revenue collections, bonus payments to the contractors in case of reduced road accidents, on time road maintenance and upgrades, provision of road safety features, minimised complaints from road users and local residents. Furthermore, other factors playing a role is compensating the concessionaire or providing subsidy payments by the government in case of an increase in traffic volume beyond traffic forecasts or a reduction in projected road usage respectively. Meanwhile, negative outcomes result from litigation

cases, corruption, public protests against direct user tolls, low traffic volumes, poverty and civil wars, selective tendering processes, poor planning and feasibility studies, unbalanced allocation of risks between the public and private partners, failure to engage competent project advisors, and irregular designing and implementation of contracts. Hence, the need to assess Uganda's PPP operating environment and apply appropriate measures used elsewhere to achieve PPP success, as well as mitigate PPP failures for road projects.

10.3.4 Evolution of Uganda's road sub sector and the future public private partnership projects

Road infrastructure in Uganda remains underdeveloped because of a lack of resource capacities and compromised governance systems and practices, as provided in the summary of findings below.

10.3.4.1 Road reforms

Since 1996, road reforms have over time marginally improved road infrastructure in Uganda because of: inflexible and bureaucratic practices of government; misaligned coordination and monitoring, and duplication of roles of government bodies; corruption; contractor and internal staff technical incompetence, and infighting within and across government institutions. These issues have not only led to haphazard commercialisation of road infrastructure development operations, but have also frustrated efforts by road agencies to improve overall sub sector performance. To avoid PPPs falling into similar traps, government must change its public service delivery style.

10.3.4.2 The current road sub sector performance

The road physical performance since 2011 has been increasing by 1%, and as of 2017, only 3.52% of the total public road network was paved. Inadequate financing and mismanagement of public funds mainly cause such an insignificant improvement and performance of road infrastructure in Uganda. Therefore, the involvement of the private sector through PPPs would provide more financing and minimize public financial mismanagement to undertake and deliver more and better roads.

10.3.4.3 Public private partnership road project proposals

Although the proposed PPP roads have improved features compared to the existing ordinary roads and the government seems enthusiastic about their execution, the planning and implementation of these road projects has been too slow. This is attributed mainly to a general lack of PPP readiness capacities by the government, the citizens, as well as the local private sectors. Therefore, creation of structural and human resource capacities, and soliciting for stakeholder support become paramount for Uganda.

10.3.5 Legal and Policy frameworks applicable to public private partnerships in Uganda

Whereas a number of legal and policy frameworks that support PPP interventions are available, some of the critical legal and policy frameworks are either non-existent, outdated, and with major gaps/inadequacies or both. However, without a sound and complete legal and policy framework, planning and implementation of such projects cannot yield tangible results. As such, missing legal frameworks must be created and existing ones improved.

10.3.6 Suitability of Uganda's public private partnership environment for developing road infrastructure

Based on the interview data, results from the data analysis exercise explained Uganda's PPP environment for road infrastructure development from the dimensions of PPP understanding levels, motivations, challenges, readiness levels, prospects, critical success factors, and best practices that may support or derail PPP investment programs or projects. Details and summaries of findings under the aforementioned PPP dimensions are found in chapter 8 and figure 9.2.2.1 respectively. Provided in the next paragraph is the interpretation of what each of the aforementioned PPP dimension represents.

PPP understanding established the PPP awareness and knowledge capacity levels in the country. PPP motivations establishes justifiable reasons why the government of Uganda should spearhead PPPs for road infrastructure development. PPP challenges established the factors impeding the smooth planning and implementation of PPP programs. PPP readiness established the strengths within Uganda's operating environment to aid effective PPP processes. PPP prospects proposed stakeholder incentives or obstacles to the future development of PPP road infrastructure. PPP critical success factors established the key factors upon which the success of PPP road projects in Uganda would depend. Lastly, PPP best practices provided PPP fundamental principles Uganda must adhere to in order to carry forward the PPP agenda within globally acceptable standards. Overall, findings indicated the existence of both favourable and unfavourable PPP environments for road projects in Uganda, though the unfavourable outweigh the favourable factors.

10.3.7 A suitable public private partnership governance model for developing road infrastructure in Uganda

Using mainly primary data from interviews, a suitable PPP governance model for road infrastructure development in Uganda was constructed. To ensure credibility of the model, findings from the interview data took note of the findings from all the other objectives of the Thesis. The model focuses on the assessment and management of the entire PPP environment in Uganda in order to facilitate PPP road infrastructure development and sustainability. Importantly also, the model allows for such flexibility

that other sectors can make use of it, as well as other countries in Africa and beyond. Therefore, the developed model becomes a relevant guide in the governance of PPPs in all sectors in Uganda, as well as in other countries. Finally, in contrast to the previous PPP models that address a single or very few aspects of PPP governance, the developed PPP governance model proves to be comprehensive in nature. Actually, this study has established that most of the extant PPP governance models become tools for enhancing the developed PPP assessment and management governance model.

10.4 RECOMMENDATIONS OF THE STUDY

Note that all the "PPP critical success factors" and "PPP best practices" in sections 8.7 and 8.8 respectively, and the "PPP project process best management practices" raised under subsection 9.4.7 in each of the phases of the project lifecycle form the biggest part of the recommendations for this study. Therefore, the recommendations covered in this section are either appearing for the first time or providing clarification to the already captured recommendations in the aforementioned sections and subsection of the preceding chapters. Presented in subsections 10.4.1-10.4.4 below are additional recommendations.

10.4.1 Public private partnership legal, institutional and regulatory recommendations

10.4.1.1 Make PPP definition very clear and partnership component for PPPs visible

What constitutes a medium or long-term contract should be defined in the PPP Act or regulations. Furthermore, the partnership dimensions of PPP arrangements must be emphasised in the PPP Act, regulations, guidelines and contract documents to avoid ambiguity.

10.4.1.2 A proposed relationship between privatization, public procurement, and public private partnership

Unless government is planning to phase out privatization in the near future, the study recommends privatization as the third option after PPP and public procurement in the application of the PIMS, since all three options happen to be heavy public investment options and involve private sector participation. In addition, the PPDA, the PPP Unit and the Privatization Unit should be merged to form a single public entity but with three distinct directorates to address PPP, public procurement and privatization respectively. Against this backdrop, leaving the three entities independent of each other creates parallel systems or structures, which may indirectly force such public institutions to compete against each other, whereas they should be complementing one another. Therefore, little success may be achieved if the status quo continues.

10.4.1.3 Make the Public Private Partnership Unit a semi-autonomous entity

The PPP Unit may not operate to full capacity as long as it remains under the direct control of the MFPED. For instance, unlike UNRA, PPDA, URA, and UIA (semi-autonomous entities), URF which is directly controlled by MFPED has had operational challenges (refer to section 5.3.5). While most of the PPP Units across the world directly operate under the Ministry of Finance, however, the bureaucratic nature of public systems in Uganda would necessitate a semi-autonomous status for the PPP Unit.

10.4.1.4 Clarity of the PPP law and formation of PPP regulations, guidelines and standard documents

Regarding clarity of the PPP law, the PPP Act should be clear on whether the PPP project officer and team are ad hoc or permanent positions in terms of PPP project operations; that is, the contracting authority should either have a specific team and officer for each PPP project or a single team and officer for all the PPP projects collectively. Furthermore, the regulatory and technical responsibilities of the PPP Unit and PPP committee should be distinct and clearly separated. Meanwhile, critical issues regarding formation of PPP regulations, guidelines and standard documents are that, government must fast-track development of PPP regulations, guidelines, standard bidding and contract documents, road tolling policy, PPP dispute resolution schemes (e.g. procurement administrative review mechanisms), and PPP threshold values for determining the most suitable procurement method for a PPP project.

10.4.1.5 PPP Act should provide for renegotiations and land acquisitions

Law or policy provisions for renegotiations become unavoidable because of the long-term nature of PPP contracts, which makes renegotiations likely to occur many times during the lifetime of the project. As for the land provisions, a bad public procurement precedent has been set in the past. In 2008, NSSF purchased 435 acres of land in Temangalo without following public procurement procedures. The argument by the defendants then was that “land was an investment but not a procurement”. Such ill-motivated interpretation was put forward because land had not been provided for in the PPDA Act of 2003. Subsequently, in the 2014 amendments of the PPDA Act 2003, land was provided for and defined as a procurement therein. As a precautionary measure, the PPP laws must provide for land acquisition and renegotiations.

10.4.1.6 PPP legal framework must be explicit on how the local government entities (Districts, Town councils etc.) fit within the country's PPP system.

As it stands, the public private partnership guidelines for local governments of Uganda (developed by Ndandiko and Ibanda on behalf of UNDP and MoLG) seem to have been disregarded during the development of the 2015 PPP Act. Does this suggest that Uganda's PPP system is centralised?

10.4.2 Road tolling recommendations

Inflation adjustment measures should be incorporated into PPP policies and contracts, and these should protect the interests of the concessionaires as well as those of the road users and the citizens as a whole. Government should encourage local commercial banks, insurance companies and pension markets to syndicate locally and with international counterparts as a means of promoting local content, as well as progressively building internal capacity and experience for future PPP projects. Government must avoid constructing many alternative transport modes or roads parallel to the toll roads, because this may reduce the projected traffic volume. Finally, during non-rush hours, toll fees should be lowered so that PPP toll roads are kept busy to generate enough toll revenues.

10.4.3 Project planning and management recommendations

The best and less risky PPP format which the government should think of employing to develop road infrastructure is the design, construction, finance, operate and maintenance (DBFOM) model, unless there are strong justifications for undertaking a project on a different basis. Government must set aside funds for structuring PPP projects, conducting feasibility studies, engaging transaction advisers, and for training and exposure of PPP staff. Given the current resource capacity constraints, the government must avoid simultaneous execution of many PPP projects. Lastly, one way to avoid unnecessary PPP processes and delays, is that the team that approves feasibility studies should be the same one to approve a project for public procurement option, or to provide a rejection decision, without having to send a project proposal to another team to conduct further evaluations (as is the case with the PIMS of Uganda). However, this requires that the approving team for the feasibility studies must be very knowledgeable in both PPPs and public procurement.

10.4.4 Cultivate cordial relationship between the PPDA Authority and the PPP Unit

The PPP Unit must benchmark and work closely with the PPDA Authority to establish strides taken by the Authority to attain the current level of success, and the challenges it has not effectively solved, and the reasons thereof, so as to draw relevant lessons therefrom. This becomes important to the PPP Unit, partly because the PPDA Authority has been in operation for about 15 years compared to the 3 years of

the PPP Unit, and because both PPP and public procurement are procurement options. As such, they share many common features, since the operating environment is similar to some extent.

10.5 CONCLUSION

The study has demonstrated that the PPP environment in Uganda for road infrastructure development is promising, though with enormous obstacles that require urgent attention. Actually, the PPP challenges and obstacles outweigh the available capacities and anticipated benefits. However, Uganda has the advantage of leapfrogging through the PPP maturity trajectory, since it can draw meaningful lessons from countries that have conducted PPP projects well before Uganda's PPP intentions (refer to the whole of chapter 4).

While no country in the world has ever, or would ever, adopt PPPs after attaining 100% PPP maturity, for Uganda to proceed and steadily implement PPPs it must first comply with the minimum globally acceptable standards. Based on the findings, the foremost intervention of government must be to develop sound and adequate legal and regulatory frameworks, as well as PPP human resource capacities within government entities. With a view towards arresting the prevailing situation, this study has developed a suitable public private partnership assessment and management governance model. The model was developed purely from the outcomes of the investigations of this research, and a detailed description of how the model works was provided. While the developed model together with its descriptions fit the PPP environment for the road sub sector well, the model equally applies to other sub sectors and sectors of Uganda, as long as sector/sub sector specific PPP operating conditions are considered.

Finally, in addition to the developed model, PPP critical success factors, PPP best practices, PPP project process best management practices, and recommendations have been provided. Suffice to say, the aforementioned outputs of this study are meant to enhance road infrastructure development in Uganda through PPP good governance traits.

10.6 LIMITATIONS OF THE STUDY

Emanating from the PPP practices in Uganda, and how the research was conducted, provided below are three main categories of limitations of the study.

10.6.1 Road sub sector and legal framework limitations

The study conducted research on a sub sector (roads) where no PPP road project has concluded the procurement phase, nor started on the construction phases. Secondly, the study partly conducted

research on new and evolving PPP laws of Uganda of which usage is currently limited and its suitability not yet fully tested.

10.6.2 Research methodological approach and instrument limitations

The study only applied a qualitative research approach for both data collection and analysis, and therefore missed out on the advantages of combining qualitative and quantitative approaches into a single study. Secondly, because the design of the interview guide never considered profession specific expertise, the study assumed that each interviewee had to be knowledgeable in every PPP aspect of the investigation. As such, each respondent had to respond to all questions, including those outside their specific profession or those they never had good knowledge of.

10.6.3 Data collection limitations

Despite the researcher's efforts to involve all the relevant sectors in the collection of primary data, the participation of intergovernmental organisations and private (for profit) sector companies in the research interviews, was extremely low. As a result, findings from the highly represented sectors may have overshadowed responses from the less represented sectors.

10.7 AREAS FOR FURTHER STUDY

Areas for further research are drawn from the main findings of the study. These include: To replicate the current study for the housing, health and energy sectors; To replicate the current study, while taking the private sector perspective; To conduct a quantitative study based on the developed model; To investigate the impact of the third sector (intergovernmental and civil society organisations) in the governance of PPP arrangements; To use a case study approach and investigate the governance of PPP road projects in Uganda. Finally, each of the themes of the empirical study (i.e. PPP understanding, PPP motivations, PPP challenges, PPP readiness, PPP critical success factors, and PPP best practices) can be treated as independent research topics.

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APPENDIX A

INTERVIEW GUIDE

Part One: Personal Profile of respondents

Section A: General information

1.1.1: Current organisation.

1.1.2: Designation.

1.1.3: Academic qualifications.

1.1.4: PPP experience (in years).

1.1.5: Membership to professional bodies.

Part Two: General Understanding of PPPs in Uganda's Road sub sector

Section A: Positioning PPPS in the development of road infrastructure in Uganda

2.1.1: What is your understanding of the term PPP?

2.1.2: How have PPPs progressed in the road sub sector in Uganda?

2.1.3: What have been the motivations for developing road infrastructure through PPP arrangements?

2.1.4: Explain the general perceptions in the country about the current PPP program for road infrastructure development?

2.1.5: Are there any significant challenges affecting the implementation of PPP road projects?

2.1.6: To what extent are PPPs likely to address Uganda's road infrastructure development needs?

Section B: Strategic implementation of PPP program in the road sub sector

2.2.1: What best practices need to be complied with if PPPs are to facilitate effective development of road infrastructure in the country?

2.2.2: If there was one thing the road sub sector needs to change or do for effective implementation of the PPP program, what should that be, and why?

2.2.3: In your view, what lessons can the road sub sector in Uganda draw from the international PPP road project experiences?

Part Three: PPP Operating environment for road infrastructure development in Uganda

Section A: PPP legal framework

3.1.1: What PPP guiding laws and policies are in place; and how do they facilitate the implementation of road infrastructure projects under PPP arrangements?

3.1.2: What structures are in place to enable systematic planning and assessment of road project proposals to decide whether they are worth being executed as PPPS?

3.1.3: What forms of conflict resolution schemes are available; and how do they address PPP project management issues?

3.1.4: From your experience, have you identified any gaps in the existing PPP legal framework, and practices?

Section B: PPP institutional framework

3.2.1: Has the government established a clear and strong PPP institutional framework supported by committed, competent and well-resourced institutions?

3.2.2: What capabilities do public agencies have in order to effectively deal with abrupt or critical PPP contract changes?

Section C: Road sub sector PPP project operational potential

3.3.1: Does the road sub sector have comprehensive PPP road infrastructure development plans?

3.3.2: How are public concerns and interests being safe guarded on PPP infrastructure projects?

3.3.3: How successful has been the allocation and management of risks between the public and the private sector for the national-level PPP projects in recent years?

3.3.4: To what extent would you be contented with foreign investors executing most of the PPP road infrastructure projects?

3.3.5: From your experience, do private or public sector organisations find difficulty in using national labour as part of the PPP projects implementation teams?

3.3.6: How do you view the public sector's behaviour towards the need to strike a balance between achieving public service delivery objectives and delivering profitability to private sector partners?

Section D: Investment climate

3.4.1: What is the influence of politics on the development of road infrastructure through PPP mechanisms?

3.4.2: Do you think the government provides a favourable environment in which the private sector can contribute to road infrastructure development?

3.4.3: Does the private sector demonstrate sufficient interest and capacity in ensuring that PPP road projects deliver value for money?

3.4.5: Does the public sector have a robust revenue stream needed for the private sector to recover its up-front capital expenditure and make some profits?

3.4.6: Do you think road end-user charges alone can be enough to meet all private sector payment demands?

3.4.8: How is repatriation of profits by overseas investors being treated; and are there any restrictions on the use of expatriate personnel?

Section E: Financial facilities

3.5.1: How can you describe the behaviour of the public sector in fulfilling payment obligations for PPP contract projects?

3.5.2: How can the government make the charging of user fees a viable source of income for concessionaires?

3.5.3: What incentives does government provide the private sector for road infrastructure projects?

3.5.5: How dependable are the insurance and pension markets in providing useful risk reduction products for PPP road projects?

3.5.6: How available and favourable are the financial conditions for developing road infrastructure through PPP arrangements?

3.5.8: How should the usage of the roads be managed to avoid low revenue collection?

Thank you very much for your participation

APPENDIX B

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STELLENBOSCH UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH

TITLE OF THE RESEARCH: Public Private Partnership for Road Infrastructure Development in Uganda

REFERENCE NUMBER: SU-HSD-004341
RESEARCHER: Mugarura Jude Thaddeo
ADDRESS: School of Public Leadership

CONTACT: 0752960610; mugarurajude@yahoo.com

Please append your signature on this consent form if you choose to participate in the study. Two copies of this form are being provided, one is for you to sign and return, and the other is yours for filing.

I have read and understood the information above and agree to participate in the study. I know that my participation is voluntary and I'm free to refuse or withdraw from this study at any time. In case you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development. You have the right to receive a copy of the Information and Consent form.

Signature:

Name:

Date:

If you are interested in the results of the study, provide your address details in the space below, so that I can send you a copy of the findings when the study is completed.

Address……

……

Yours sincerely

Mugarura Jude Thaddeo

APPENDIX C

STELLENBOSCH UNIVERSITY
INFORMATION SHEET

Dear Respondent

Research Topic: Public private partnership for road infrastructure development in Uganda

The following information is being provided to assist you consider participating in the research being conducted as part of my doctoral degree studies in public and development management, supervised by Dr. Zwelinzima Ndevu in the School of Public Leadership at Stellenbosch University in South Africa.

The study investigates the current and future PPP environment prospects in order to develop a suitable PPP model for road infrastructure development in Uganda. Your participation in this research will provide useful information on PPPS and subsequently contribute to road infrastructure development in the country. You do qualify to participate in the study because of your multi-disciplinary experiences and knowledge in PPPS either as a public, private, intergovernmental organisation, and civil society organisation practitioner or researcher.

The purpose of this engagement is to seek your opinion on the availability and suitability of the legal and institutional frameworks, the investment climate, the financial facilities, the organisation and project operational capacities, and any other information you find relevant in order to develop road infrastructure through PPP mechanisms. It is expected that the interview sessions will last for 60-90 minutes and will be conducted at a place of your convenience.

Please kindly be informed that the interview proceedings will be tape recorded to enrich field notes and enable accurate reporting. Besides myself, be assured that the recorded tapes will not be availed to any other audience, and all the data therein will be handled with the strictest confidentiality it deserves. From your part, in case you choose to record the interview proceedings, I advise and request that you keep the same level of confidentiality with any other audience thereafter. Otherwise the researcher shall not be held accountable for any shortcomings resulting from your failure to comply with this requirement.

Attached is the University's ethical clearance letter that permits this study to be undertaken.

Thank you very much for your cooperation.

Signature:

Mugarura Jude Thaddeo

PhD candidate

Contact: 0752960610; mugarurajude@yahoo.com

Signature:

Dr. Zwelinzima Ndevu (Supervisor)

School of Public Leadership

Stellenbosch University

Contact: +27824194756; zwelinzima@sun.ac.za

APPENDIX D

UNIVERSITEIT
STELLENBOSCH
UNIVERSITY

APPROVED WITH STIPULATIONS
New Application

21 June 2017

Project number: SU-HSD-004341

Project title: Public private partnership for road infrastructure development in Uganda

Dear Mr Jude Thaddeo Mugarura

Your new application received on 15 May 2017 was reviewed by the REC: Humanities and has been approved with stipulations.

Ethics approval period: 21 June 2017 – 20 June 2020

REC STIPULATIONS:

The researcher is requested to update the informed consent form and information to include the contact details of Stellenbosch University's Division for Research Development, as per the REC template available on the REC website. Furthermore, the researcher must add his contact details as well as the contact details of his supervisor in the information sheet. [RESPONSE REQUIRED].

Please take note of the General Investigator Responsibilities attached to this letter. You may commence with your research after complying fully with these guidelines.

If the researcher deviates in any way from the proposal approved by the REC: Humanities, the researcher must notify the REC of these changes.

Please use your SU project number (SU-HSD-004341) on any documents or correspondence with the REC concerning your project.

Please note that the REC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

FOR CONTINUATION OF PROJECTS AFTER REC APPROVAL PERIOD

Please note that a progress report should be submitted to the Research Ethics Committee: Humanities before the approval period has expired if a continuation of ethics approval is required. The Committee will then consider the continuation of the project for a further year (if necessary)

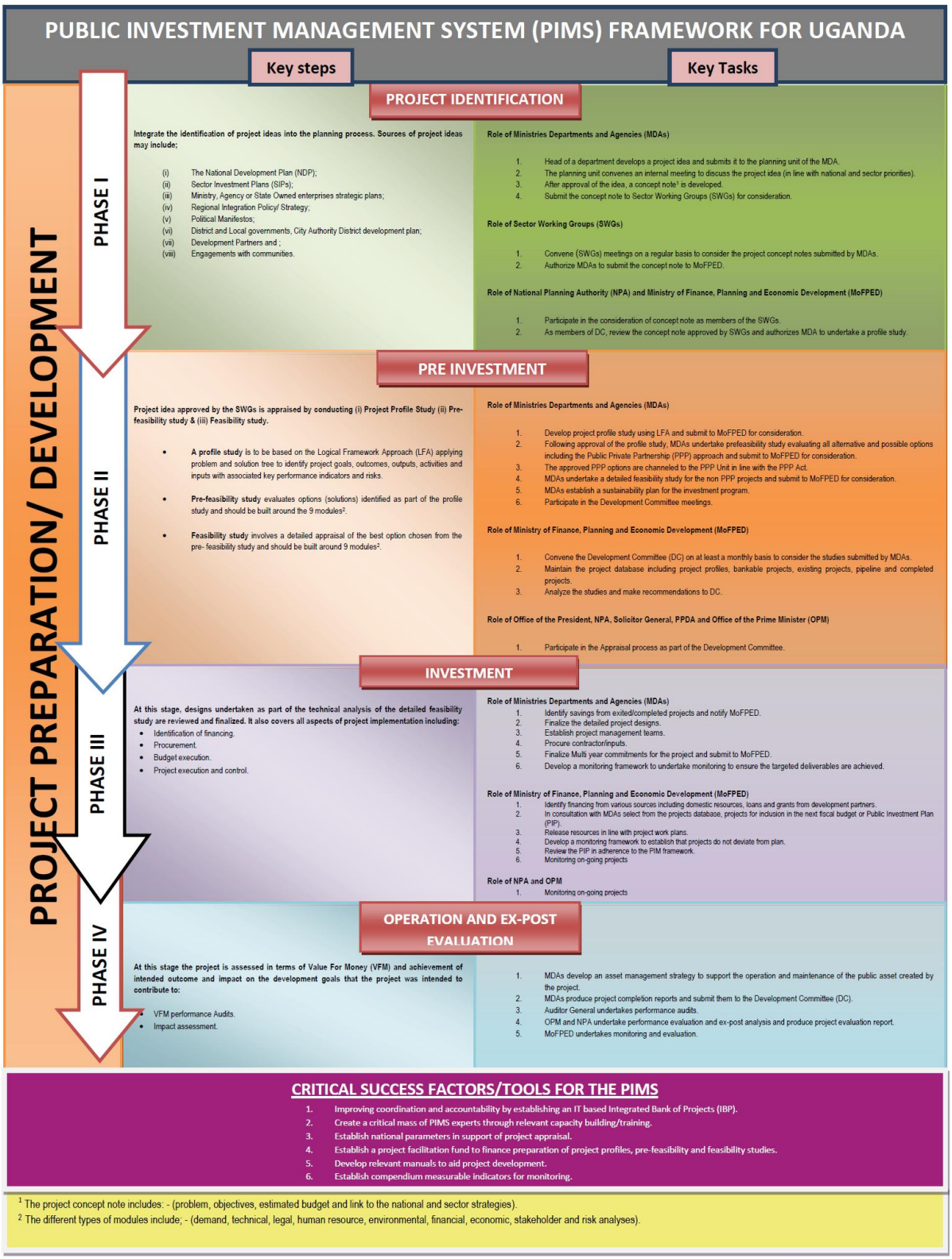
If you have any questions or need further help, please contact the REC office at cgraham@sun.ac.za.

Sincerely,

Clarissa Graham

REC Coordinator: Research Ethics Committee: Human Research (Humanities)

APPENDIX E; Public Investment Management System



APPENDIX F:

Activity	Impact	Mitigation Measures
Assessment of the need for road construction	• Perceived unfairness by some members of the community • Negative attitude towards government initiatives	• Involve local communities in assessing he need for road construction.
Selection of the alignment	• Loss of productive soils • Loss of residential land • Reduced property values • Loss of access to settlement which will be by passed	• Avoid areas with productive soils. • Avoid built up cultivated areas. • Provide link or loop road to by-passed settlement.
Negotiating of sites for quarries and borrow pits	• Perceived unfairness	• Provide adequate compensation
Curbing of encroachment onto the road reserve by unplanned settlement	• Perceived unfairness	• Sensitize local people about the need for road reserve and the provisions o the Roads Act. • Collaborate with local authorities to curb these practices

Activity	**Impact**	**Mitigation Measures**
Recruitment of Labour Force	• Creation of employment opportunities • Improvement in household incomes • Influx of job seekers • Social promiscuity (gambling, prostitution assaults) • Pressure on social services such as clinics, schools	• Give first preference to locals when recruiting the labour force • Provide health education and collaborate with the police so as to reduce criminal activities • Give first preference to locals when recruiting labour force. If unavoidable supplement social services such as clinics.
Provision of accommodation to the labour force	• Increased rentals • Loss of vegetation through firewood demand by the labour force • Contamination of both surface and groundwater through poor sanitary facilities, and spread of epidemics (cholera, etc) • Liter • Depletion of water used by local communities for domestic water supply.	• Provide workers with their own accommodation • Firewood should be extracted from approved woodlands, alternatively provide kerosene or electricity for heating • Install approved sewage disposal facilities, e.g. latrines, septic tanks • Provide facilities for solid waste disposal • Develop wells or boreholes for supplying water to the labour force.
Workshop construction and operations	• Loss of vegetation • Contamination of both surface and groundwater through oil spills • Temporary air noise pollution from machine operations	• Establish workshops on sites without significant woodlands • Used oil should be sent for recycling or use biological dispersants to break down oil and lubricants • The contractor should consult width the MoWHC/RAFU/Roads Agency before locating projects office, sheds and construction plant. • Camps should not be located near settlements or drinking water supply intakes • On completion of the project, all structures should be removed or given to local communities for their use. • The site should be restored to near natural or stable conditions after use. • Exposed areas should be planted with indigenous tree species

Activity	Impact	Mitigation Measures
Clearance of vegetation along the road, quarry sites and borrow areas, access roads	• Loss of vegetation and habitats • Destruction of rare and/or endangered species • Acceleration of soil erosion	• Select alignments which minimise vegetation loss • Avoid areas of specials conservation value • Develop plan to protect threatened species • Rehabilitate borrow area, quarries and access roads by planting grass and trees
Demolition of structures within the road reserve	• Loss of buildings	• Avoid locating the road in built up areas. If unavoidable provide fair compensation
Explosive, combustible and toxic material	• Fire and explosion hazards • Ground and surface water pollution from runoff and migration of spills/leaks and improperly discarded oils and lubricants	• Hazardous materials should not be stored near surface waters • All lubricants and oils should be collected and recycled or disposed of off site • Plastic sheeting should be placed under hazardous material and their storage areas to collect and retain leaks and spills. • Contaminated runoff from areas should be drained/ led into ditches and ponds with oil traps at their outlets • Contaminated and worn plastic sheeting should be packed into drums and disposed of off site
Removal of top and stockpiling at quarry sites and borrow area, and along access roads	• Siltation of streams, and lakes due to soils washed from stockpiles • Acceleration of soil erosion	• Excavate interior ditch around stockpiles materials being washed away by surface runoff • Stockpiled materials should be covered with fabric or other materials • Avoid stockpiling near water ways/wetlands or on slopes.
Earthworks/slope stabilization	• Accelerated erosion resulting in slope instability, landslides. • Destruction of vegetation and property • Increased suspended solids in surface waters	• Protect exposed slopes using conventional civil engineering structures in conjunction with bio-engineering techniques • Protect areas susceptible to erosion using either temporary or permanent drainage works • Prevent ponding • Prevent scouring of slopes • Newly eroded channels should be backfilled and restored to natural contours

Activity	Impact	Mitigation Measures
Hauling of construction materials such as gravel ; materials, water	• Staining of household goods by dust • Communication problems due to noise • Disruption to sleep due to noise • Traffic accidents • Accidents involving animals	• Avoid locating access roads near settlement, if unavoidable regular watering of access roads to minimise dust formation. Vehicles delivering materials should be covered to reduce spills • Construct speed activities at night in settled area • Erect traffic signs along routes used to haulage trucks • Construct crew should take care to avoid animals
Excavations along the road	• Siltation of streams, swamps and lakes by soil washed away from excavations. • Damage to archaeological, historical and cultural sites • Destruction of animals habitats	• Construct/install drainage structures to avoid direct discharge of water from the road into streams • Avoid alignments that cause such damages, or consider relocating materials occurring at these sites • Avoid alignment that destroy significant animals habitats
Excavation of gravel and borrow pits	• Gully formation due to unstable side slope of borrow pits • Objectionable visual intrusion when pits are on prominent features • Loss of land • Noise and/or dust	• Rehabilitate borrow and gravel pits by stabilizing side slopes or backfilling • Avoid siting pits on prominent relief features • Compensate land owners • Avoid siting pits near settlements
Traffic diversion	• Delays in transportation of goods and passengers • Traffic congestion • Traffic accidents along diversion roads	• Provide advice to the public on shorter alternative routes, and ensure that road works are completed on time • Diversion routes should accommodate two-way traffic, and that they should be all weather • Warn road users about traffic diversion by using signs
Construction of bridges	• Scouring of channels beds and banks • Increase in sediment concentration	• Locate the bridge so that it does not cause significant changes to flow velocities • Prevent scouring using gabions, stone pitching lining banks with concrete.

Activity	Impact	Mitigation Measures
Asphalt plant operation	• Loss of vegetation if firewood is used to heat bitumen • Littering the landscape due to improper disposal of unused bitumen and aggregates • Contamination of soil by bitumen • Contamination of water due to oil spills	• Use of firewood for heating bitumen should be discouraged. Bitumen haters should use kerosene, diesel or gas • Unused bitumen and aggregates should be collected for future use • Line the soil surface at sites where oils are likely to be spilled • Use biological dispersants to break down used oil, or landfill techniques • Contractor should use bitumen emulsion where feasible. In hilly areas with steep road gradients, cut-back bitumen should be used • Bitumen should not be discharged into side drains • Bitumen drums should be stored in designated locations and not scattered along the road
Surfacing	• Hazard during transportation of heated bitumen • Spilled bitumen may contaminate water	• Erect road signs to warn other road users about road works • Trees vegetation and private property in the vicinity should be protected during bitumen spraying • Bitumen should not be applied during strong winds, or heavy rains • Avoid spilling of bitumen
Some crushing plant	• Excessive noise and disturbance to local residents and workmen • Damage to local crops from dust emissions • Impact on surface water quality due to dust emissions	• Workmen should be provided with protective clothing including ear muffs and masks • Locate plants away from population centers, drinking water intakes, cultivable lands and sensible ecosystems • Stone crushing plant should be fitted with approved dust control devices and operated in accordance with manufacturer's specification

Activity	Impact	Mitigation Measures
Construction of drainage channels	• Siltation of streams, swamps and lakes due to lose soil washed into them • Modification to the natural drainage pattern	• Loose soils should be stockpiled and protected from being washed away by covering it. Constructing ditches around them • Utilize as much as possible the natural drainage features, and where not possible provision should be made for; (i) Excavation of infiltration ditches and soak pits within the road reserve; (ii) Acquisition of land through which artificial outfall drains are to be excavated for safe discharge into lower catchment.

Activity	Impact	Mitigation measures
Existence of the road	▪ Split communities ▪ Reduced vehicle maintenance costs ▪ Disruption to the movement of wildlife	▪ Provide facilities for pedestrians to cross road ▪ Provide facilities for wildlife to cross the road e.g. tunnels
Vehicular traffic	▪ Human accidents ▪ Livestock accidents ▪ Destruction of wild animals through accidents ▪ Disruption of communication in schools, hospitals and places of worship due to traffic noise ▪ Disruption to sleep due to traffic noise	▪ Put up road signs warning road users about pedestrians and animals on the road ▪ Install speed control devices e.g. humps ▪ Erect road signs warning road users about the possible presence of animals on the roads ▪ Erect speed controls near schools ▪ Restrict use of engine breaks near schools, hospitals and settlements
Transportation of livestock	▪ Spread of animal diseases ▪ Improved access to livestock markets	▪ Movement of animals should be authorized by the department of animal industry
Passenger transportation	▪ Rural-urban migration ▪ Spread of diseases (HIV/AIDS, STDs, cholera etc) ▪ Improved access to hospitals/health centres ▪ Increased access to markets for business activities ▪ Development of business opportunities e.g. roadside stalls, woodcrafts. ▪ Reduced transport costs to markets ▪ Unplanned settlement ▪ Poaching of wild animals ▪ Illegal clearance of vegetation for firewood ▪ bushfire	▪ Encourage local authorities to develop employment opportunities in rural areas ▪ Health officers should undertake health education campaigns. Transport operators should be encouraged to do the same ▪ Parking facilities should be provided by business centres ▪ Regular road maintenance should be undertaken ▪ Local authorities should ensure that all settlements conform with development plans ▪ Uganda Wildlife Authority and police should monitor such incidents and enforce the relevant laws ▪ Erect traffic signs prohibiting poaching and stopping of vehicles in protected areas ▪ Local authorities and forest department should enforce relevant laws ▪ Erect traffic signs warning of dangers of uncontrolled bushfires, and prohibiting starting of fires in areas with protected forests

Activity	Impact	Mitigation measures
Drainage of water from the road	▪ Flooding of agricultural lands and homesteads ▪ Gulley formation along drainage channels ▪ Siltation of strings, swamps and lakes ▪ Increased stability of the water	▪ Dig infiltration ditches and soak pits within road reserves. Outfall drains with erosion protection works should be considered ▪ Erect erosion protection measures e.g. scour checks, lining of drains. Regular maintenance will also minimise soil erosion ▪ Construct intersection ditches, settling ponds to prevent muddy water reaching watercourses.
Transportation of goods	▪ Reduced costs of commodities	▪ Regular road maintenance should be undertaken
Vehicle emissions	▪ Air pollution ▪ Increase in respiratory and eye infections	▪ Plant trees within the road reserve to filter particulates ▪ Introduce legal requirements for proper maintenance of vehicles

Activity	Impact	Mitigation measures
Manual road maintenance	▪ Creation of employment opportunities ▪ Increase in household incomes ▪ Sense of ownership of the road ▪ Prompt road maintenance ▪ Reduction in vandalism of road structure ▪ Development of construction skills	▪ Give preferences to local communities in awarding road maintenance labour based contracts
Ditch cleaning	▪ Flooding of agricultural lands and homesteads due to modification of points or direction of discourage of ditches	▪ Form offshoots to split flow in the drain. Construct infiltration ditches, soak pits to prevent water being discharged towards agricultural lands and homesteads
Culvert repairs/replacement	▪ Disruption of traffic ▪ Increase in turbidity of water due to excavated materials being washed into the affected stream	▪ Erect road warning signs and advice road users to use alternative roads ▪ Excavated materials should be suitably stockpiled and covered so that they will not be washed into water sources
Remix pothole patching	▪ Littering of the landscape due to the disposal of materials excavated from potholes to be repaired ▪ Loss of vegetation through extraction of firewood for heating butmen ▪ Traffic accidents due to potholes left open overnight ▪ Accidents due to disruption of traffic flows by roadworks	▪ Excavated materials should be used for backfilling borrow and gravel pits ▪ Firewood for heating the butmen should be obtained from sites approved by the forest department and local communities ▪ Excavated potholes should be covered with crushed stones and sand if they are going to be left open overnight ▪ Erect road signs warning road users about ongoing road maintenance works
Medium and light grading	▪ Disruption of traffic flows ▪ Increased pressure on water sources used by the community	▪ Warn the public about planned and on-going roadworks and advise an alternative route to avoid delays due to roadworks ▪ Water for road maintenance should be obtained form sources which do not affect water supply to communities
Heavy grading, regravelling and spot gravelling	▪ Reduced land use options on sites where borrow pits will be located ▪ Loss of land values on properties on which borrow pits will be located ▪ Gulley formation through collapsing of side walls or borrow pits ▪ Breeding of disease causing vectors in stagnant water collecting in borrow pits ▪ Dust during transportation of field materials ▪ Noise due to haulage trucks ▪ Delays in traffic due to detours and diversions ▪ Objectionable vision intrusion of gravel pits particularly on prominent relief features ▪ Disruption of traffic flows ▪ Increased pressure on water sources used by the communities	▪ Compensate adequately owners of properties affected ▪ Rehabilitate borrow pits by backfilling or reducing slopes of side walls ▪ Backfill borrow pits if possible ▪ Watering of roads to reduce dust and covering materials to be transported ▪ Erect transport calming measure near settlements sensitive to noise e.g. schools, hospitals ▪ Warn road users about road works and suggest alternative road routes to avoid traffic delays. Ensure road maintenance works are completed promptly ▪ Gravel pits should be located on prominent relief features. If unavoidable, they should be rehabilitated by backfilling and revegetating them ▪ Fence gravel pits and provide only limited access to them ▪ Reduce slops of pits. Ideally backfill and revegetate pits ▪ Warn the public about planned and ongoing road works and advise on alternative routes to avoid delays due to the road works ▪ Water for road maintenance work should be obtained from sources which do not affect the water supply to communities